STIC Search Report
EIC 1700

STIC Database Tracking Number: 186002

TO: Michael Bernshteyn
Location: REM 10A34
Art Unit : 1713
May 3, 2006

Case Serial Number: 10/523824

From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

50 STRUCTURES FOR CLAIM 1 COMPOUND.

35 CA REFERENCES FROM THE 50 STRUCTURES

FROM THESE 35 CA REFERENCES 21 WERE PREPARATIONS AND 4 OF THESE PREPARATIONS USED METALLIC TELLURIUM. THUS THERE IS NO NEED TO STRUCTURE SEARCH THE STARTING MATERIALS OF CLAIM 2.

I THEN PRINTED THE REMAINING 17 CA REFERENCES ON PREPARATION WHICH DID NOT MENTION THE USE OF METALLIC TE. THE APPLICANTION WAS INCLUDED IN THIS GROUP.

LASTLY I PRINTED THE 14 REFERNCES FROM THE STRUCTURES WHICH WERE NOT LISTED AS PREPARATIONS.

YOU HAVE ALL THE CA REFERENCES WHICH HAVE THE COMPOUND OF CLAIM 1.

STIC Search Results Feedback Form

USPTO

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art found, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

  Types of relevant prior art found:
  - ☐ Foreign Patent(s)
  - ☐ Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art not found:*
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention

Comments:

Access DB# 156002

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: MICHAEL BERNSHTEYN Examiner #: 81515 Date: 04/18/06
Art Unit: 1713 Phone Number 30(571)272-2411 Serial Number: 10/523,624
Mail Box and Bldg/Room Location: 10A34 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

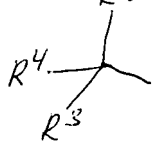
Title of Invention: Organic tellurium compound, process for producing the same

Inventors (please provide full names): Shigeru Yamago, Junichi Yoshida

Earliest Priority Filing Date: 08/06/2002

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Please, try to find an organotellurium compound of formula



(1)

and a compound of formula (2)

(2)

and a compound of formula (3) $M(R')_m$ (3)

****

STAFF USE ONLY

Searcher: R. Fuller

Searcher Phone #:

Type of Search

NA Sequence (#)

AA Sequence (#)

Vendors and cost where applicable

STN ✓

Dialog

=> FILE REG
FILE 'REGISTRY' ENTERED AT 10:24:07 ON 03 MAY 2006

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 MAY 2006 HIGHEST RN 882569-16-6
DICTIONARY FILE UPDATES: 2 MAY 2006 HIGHEST RN 882569-16-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 10:24:11 ON 03 MAY 2006

FILE COVERS 1907 - 3 May 2006 VOL 144 ISS 19
FILE LAST UPDATED: 2 May 2006 (20060502/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> D QUE
L4             1 SEA FILE=REGISTRY ABB=ON  TELLURIUM/CN
L8               STR

Ak—C—Ak      G1—G2—Te—Ak
 7  @8  9      1   2   3   4


                CH-Ak
                @5  6

VAR G1=CN/CY
VAR G2=CH2/5/8
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
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L13              STR

Ak—C—Ak      G1—G2—Te—Ak
 7  @8  9      1   2   3   4


                CH-Ak
                @5  6

VAR G1=CN/HY
VAR G2=CH2/5/8
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L15           50 SEA FILE=REGISTRY SUB=L10 SSS FUL L13
L16           35 SEA FILE=HCAPLUS ABB=ON  L15
L17           21 SEA FILE=HCAPLUS ABB=ON  L16(L)PREP/RL
L18            4 SEA FILE=HCAPLUS ABB=ON  L17 AND (L4 OR METAL?(2A)(TE OR
                 TELLURIUM))

=> D L18 IBIB ABS IND HITSTR 1-4
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254 structures from this query for Claim 1

subset search for Claim 1 where G_1 (R_4 in claim) is -CN or a heterocyclic ring

50 structures found

35 CA references

4 CA references on preparation with Te metal

L18 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:965297 HCAPLUS
DOCUMENT NUMBER: 141:411400
TITLE: Process for production of living-radical polymers and polymers
INVENTOR(S): Yamago, Shigeru; Yoshida, Junichi; Kameshima, Takashi
PATENT ASSIGNEE(S): Otsuka Chemical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
applicants
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096870	A1	20041111	WO 2004-JP5989	20040426
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1619211	A1	20060125	EP 2004-729496	20040426
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				

PRIORITY APPLN. INFO.: JP 2003-121223 A 20030425
WO 2004-JP5989 W 20040426

OTHER SOURCE(S): MARPAT 141:411400

AB The polymers are prepared by polymerizing vinyl monomers by using an azo initiator, an organotellurium compound R1TeCR2R3R4 and a ditelluride compound (R1Te)2 [R1 = C1-8 alkyl, (un)substituted aryl, aromatic heterocyclic group; R2, R3 = H, C1-8 alkyl; R4 = (un)substituted aryl, aromatic heterocyclic group, acyl, oxycarbonyl, cyano]. Thus, 10 mmol Me methacrylate was polymerized in the presence of AIBN 0.10, dimethylditelluride 0.10, and 2-methyl-2-methyltellurylpropionitrile 0.10 mmol at 60° for 2 h to give 98% PMMA with Mn 9600 and Mw/Mn 1.15.

IC ICM C08F004-00
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 29, 67
ST methyl methacrylate living radical polymn catalyst; ditelluride living radical polymn catalyst; organotellurium compd living radical polymn catalyst
IT Polymerization catalysts
(living, radical; organotellurium catalysts for preparation of living-radical polymers)
IT 2094-98-6, 1,1'-Azobis(1-cyclohexanecarbonitrile)
RL: CAT (Catalyst use); USES (Uses)
(ACHN; organotellurium catalysts for preparation of living-radical polymers)
IT 78-67-1, AIBN 2589-57-3, MAIB 2638-94-0, ACVA 10288-28-5, V 30 13472-08-7, AMBN 15545-97-8, V 70
RL: CAT (Catalyst use); USES (Uses)
(organotellurium catalysts for preparation of living-radical polymers)
IT 20334-43-4P, Dimethylditelluride 77129-69-2P, Dibutylditelluride

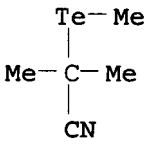
474094-06-9P **582319-76-4P** 658058-35-6P
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(organotellurium catalysts for preparation of living-radical polymers)

IT 9003-49-0P, Butyl acrylate homopolymer 9003-53-6P, Polystyrene 9003-63-8P, Butyl methacrylate homopolymer 9011-14-7P, PMMA 24991-47-7P, p-Chlorostyrene homopolymer 25034-86-0P, Methyl methacrylate-styrene copolymer 25038-87-3P, Methyl vinyl ketone homopolymer 25067-61-2P, Methacrylonitrile homopolymer 25249-16-5P, 2-Hydroxyethyl methacrylate homopolymer 25768-50-7P, Cyclohexyl methacrylate homopolymer 26355-01-1P, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer 26813-25-2P, Methacrylonitrile-methyl methacrylate copolymer 31074-25-6P, Methyl methacrylate-methyl vinyl ketone copolymer 64114-51-8P, Isobornyl methacrylate homopolymer 66004-95-3P, N-Isopropylmethacrylamide homopolymer 89558-60-1P, N-Isopropylacrylamide-N-isopropylmethacrylamide copolymer
RL: IMF (Industrial manufacture); PREP (Preparation)
(organotellurium catalysts for preparation of living-radical polymers)

IT 78-82-0, Isobutyronitrile 109-72-8, Butyllithium, reactions 600-00-0, Ethyl 2-bromoisobutyrate **13494-80-9**, Tellurium, reactions 41658-69-9, 2-Bromo-2-methylpropionitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(organotellurium catalysts for preparation of living-radical polymers)

IT **582319-76-4P**
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(organotellurium catalysts for preparation of living-radical polymers)

RN 582319-76-4 HCAPLUS
CN Propanenitrile, 2-methyl-2-(methyltelluro)- (9CI) (CA INDEX NAME)



IT **13494-80-9**, Tellurium, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(organotellurium catalysts for preparation of living-radical polymers)

RN 13494-80-9 HCAPLUS
CN Tellurium (8CI, 9CI) (CA INDEX NAME)

Te

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:696397 HCAPLUS
DOCUMENT NUMBER: 141:207655
TITLE: Process for the production of living radical polymers and polymers
INVENTOR(S): Yamago, Shigeru; Yoshida, Junichi; Kameshima, Takashi
PATENT ASSIGNEE(S): Otsuka Chemical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004072126	A1	20040826	WO 2004-JP1707	20040217
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004210796	A1	20040826	AU 2004-210796	20040217
CA 2523112	AA	20040826	CA 2004-2523112	20040217
EP 1595894	A1	20051116	EP 2004-711754	20040217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.: JP 2003-38590 A 20030217
JP 2003-331544 A 20030924
WO 2004-JP1707 W 20040217

OTHER SOURCE(S): MARPAT 141:207655

AB The present invention relates to (i) a process for the production of living radical polymers, characterized by polymerizing a vinyl monomer by the use of an organo tellurium compound CR2R3R4TeR1 and an azo polymerization initiator and

(ii) living radical polymers produced by the process, wherein R1 = C1-8 alkyl, aryl, substituted aryl, or an aromatic heterocyclic group; R2, R3 = H or C1-8 alkyl; and R4 = aryl, substituted aryl, an aromatic heterocyclic group, acyl, oxycarbonyl, or cyano. Thus, 6.38 g tellurium and 55 mmol methyllithium were stirred, 70 mmol 2-bromo-2-methyl-propionitrile was added therein and stirred to give 4.10 g 2-methyl-2-methyltelluranyl-propionitrile, 0.10 mmol of which was mixed with 0.10 mmol 2,2'-azo-bis-isobutyronitrile and 10 mmol styrene and stirred at 60° for 11 h to give a polymer with yield 94%, Mn 11,300, and polydispersity 1.13.

IC ICM C08F004-00
CC 35-3 (Chemistry of Synthetic High Polymers)
ST process living radical polymer; tellurium bromomethylpropionitrile methyllithium reactant polymn initiator prepn; methylmethyltelluranylpropionitrile initiator styrene polymn
IT Azo compounds
RL: CAT (Catalyst use); USES (Uses)
(initiators; preparation of living radical polymers)
IT Polymerization
Polymerization catalysts
(living, radical; preparation of living radical polymers)
IT 78-67-1, AIBN 2638-94-0, ACVA 10288-28-5, V 30 15545-97-8, V 70
RL: CAT (Catalyst use); USES (Uses)
(initiator; preparation of living radical polymers)
IT 415679-75-3P 474094-06-9P **582319-76-4P** 658058-35-6P
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(initiator; preparation of living radical polymers)
IT 9003-01-4P, Polyacrylic acid 9003-05-8P, Polyacrylamide 9003-31-0P, Polyisoprene 9003-39-8P, 1-Vinyl-2-pyrrolidone homopolymer 9003-49-0P, Polybutyl acrylate 9003-53-6P, Polystyrene 9011-14-7P, Methyl

methacrylate homopolymer 25014-15-7P, 2-Vinylpyridine homopolymer 25014-41-9P, Acrylonitrile homopolymer 25189-55-3P, N-Isopropylacrylamide homopolymer 25232-41-1P, 4-Vinylpyridine homopolymer 26793-34-0P, Dimethylacrylamide homopolymer 95418-60-3P, p-tert-Butoxystyrene homopolymer
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of living radical polymers)

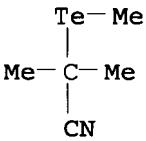
IT 109-72-8P, n-Butyllithium, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(reactant in initiator preparation; preparation of living radical polymers)

IT 41658-69-9P, 2-Bromo-2-methyl-propionitrile
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(reactant in initiator preparation; preparation of living radical polymers)

IT 78-82-0, Isobutyronitrile 585-71-7, 1-Bromoethylbenzene 600-00-0, Ethyl 2-bromoisobutyrate 917-54-4, Methyllithium 7789-60-8, Tribromophosphine **13494-80-9**, Tellurium, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant in initiator preparation; preparation of living radical polymers)

IT **582319-76-4P**
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(initiator; preparation of living radical polymers)

RN 582319-76-4 HCAPLUS
CN Propanenitrile, 2-methyl-2-(methyltelluro)- (9CI) (CA INDEX NAME)



IT **13494-80-9**, Tellurium, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant in initiator preparation; preparation of living radical polymers)

RN 13494-80-9 HCAPLUS
CN Tellurium (8CI, 9CI) (CA INDEX NAME)

Te

L18 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:961295 HCAPLUS
DOCUMENT NUMBER: 140:111595
TITLE: Cyclodextrin-Derived Diorganyl Tellurides as Glutathione Peroxidase Mimics and Inhibitors of Thioredoxin Reductase and Cancer Cell Growth
AUTHOR(S): McNaughton, Michael; Engman, Lars; Birmingham, Anne; Powis, Garth; Cotgreave, Ian A.
CORPORATE SOURCE: Institute of Chemistry, Department of Organic Chemistry, Uppsala University, Uppsala, S-751 24, Swed.
SOURCE: Journal of Medicinal Chemistry (2004), 47(1), 233-239
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal

LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:111595

AB Water-soluble diorganyl tellurides of the alkyl aryl or dialkyl type were prepared by treatment of mono-6-tosyl-β-cyclodextrin with sodium alkanetellurolates or arenetellurolates or sodium telluride. The novel cyclodextrin-derived organotelluriums were evaluated for their capacity to catalyze the reduction of hydrogen peroxide, tert-Bu hydroperoxide, and cumene hydroperoxide in the presence of glutathione, NADPH, and GSSG-reductase (coupled reductase assay). Cyclodextrins carrying 4-(N,N-dimethylamino)phenyltelluro and n-butyltelluro groups, resp., were the most efficient glutathione peroxidase mimics. Reduction of lipophilic cumene hydroperoxide often proceeded 10-20 times faster than reduction of the more hydrophilic hydroperoxides, which cannot bind into the hydrophobic interior of the cyclodextrin. Thus, it seems that the carbohydrate moiety acts as a binding site for the hydroperoxide substrate. The cyclodextrin derivs. were also evaluated for their capacity to inhibit thioredoxin reductase/thioredoxin and cancer cell growth in culture. IC50 values for inhibition of thioredoxin or thioredoxin/thioredoxin reductase were in the submicromolar range for the best inhibitors. Two of the compds. were found to inhibit the growth of MCF-7 cells in culture with IC50 values in the low micromolar range.

CC 33-4 (Carbohydrates)
Section cross-reference(s): 1, 7, 29

ST hydroperoxide redn catalyst cyclodextrin telluride; thioredoxin reductase inhibitor anticancer cyclodextrin organotellurium; cyclodextrin telluride prepn glutathione peroxidase mimic antioxidant

IT Oligosaccharides, preparation
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(cyclic; preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

IT Reduction catalysts
(evaluation of cyclodextrin-derived diorganyl tellurides for their capacity to catalyze the reduction of hydrogen peroxide, tert-Bu hydroperoxide, and cumene hydroperoxide)

IT Antioxidants
Antitumor agents
Human
Neoplasm
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

IT Thioredoxins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

IT Tellurides
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

IT 9004-10-8, Insulin, biological studies 9013-66-5, Glutathione peroxidase 9074-14-0, Thioredoxin reductase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

IT 140874-31-3P 647842-15-7P **647842-17-9P** 647842-19-1P
647842-21-5P 647842-23-7P **647842-25-9P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

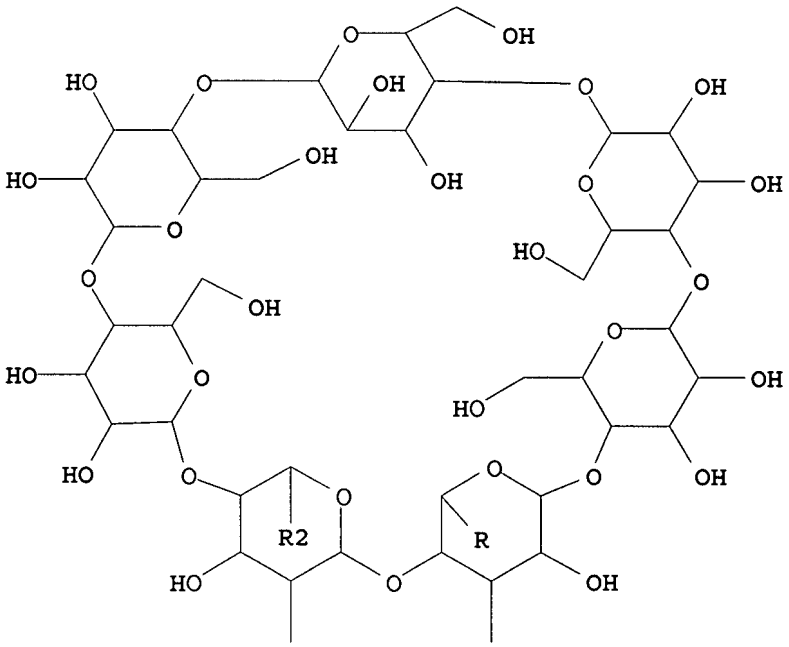
IT 75-91-2, tert-Butylhydroperoxide 80-15-9, Cumene hydroperoxide
106-41-2, 4-Bromophenol **13494-80-9**, Tellurium, reactions
14691-59-9, Peroxide (HO21-) 32294-60-3, Diphenylditelluride
35684-37-8 68168-23-0, β-Cyclodextrin hydrate 77129-69-2
108743-34-6 647842-29-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

IT 67217-55-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

IT **647842-17-9P 647842-25-9P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)

RN 647842-17-9 HCAPLUS
CN β-Cyclodextrin, 6A,6'A-tellurobis[6A-deoxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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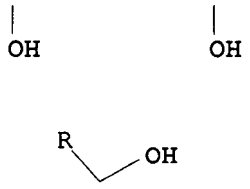
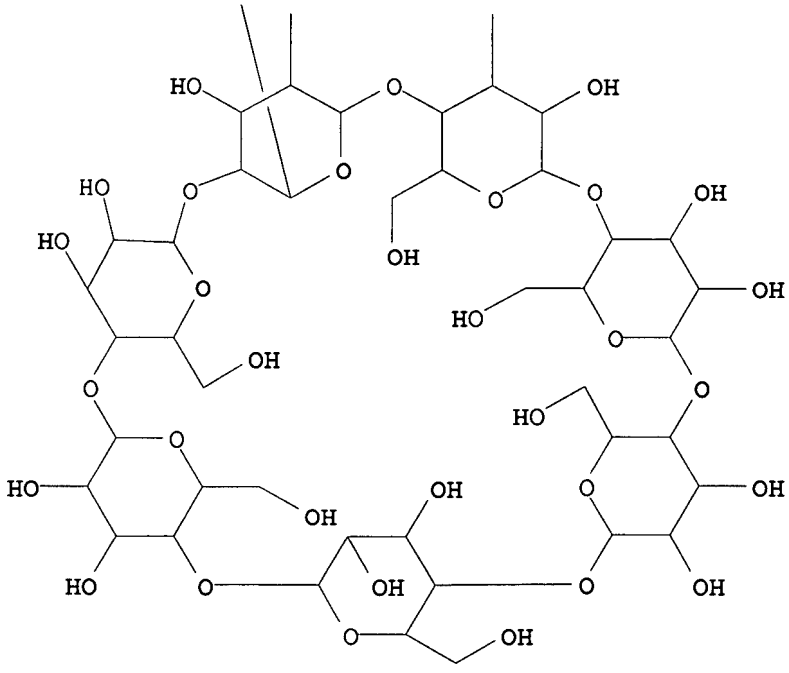


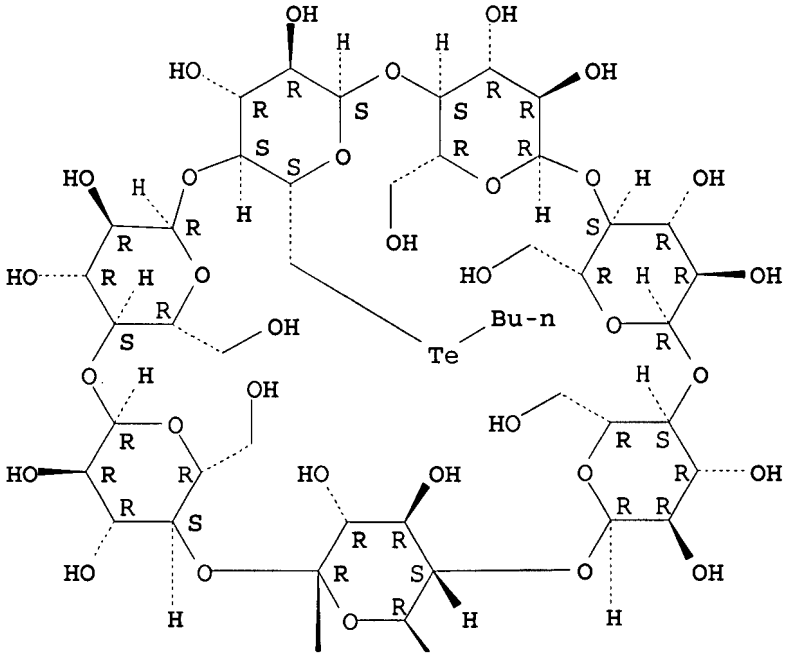
PAGE 3-A



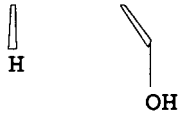
RN 647842-25-9 HCAPLUS
CN β-Cyclodextrin, 6A-Te-butyl-6A-telluro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



IT **13494-80-9**, Tellurium, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cyclodextrin-derived diorganyl tellurides as glutathione peroxidase mimics and inhibitors of thioredoxin reductase and cancer cell growth)
RN 13494-80-9 HCAPLUS
CN Tellurium (8CI, 9CI) (CA INDEX NAME)

Te

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:217049 HCAPLUS

DOCUMENT NUMBER: 112:217049
TITLE: [[(Organoethynyl)chalcogeno]methyl]trimethoxysilanes and 1-[[(organoethynyl)chalcogeno]methyl]silatranes
AUTHOR(S): Voronkov, M. G.; Sorokin, M. S.; Yarosh, O. G.; Larin, M. F.; Borodina, N. M.
CORPORATE SOURCE: Irk. Inst. Org. Khim., Irkutsk, USSR
SOURCE: Zhurnal Obshchei Khimii (1990), 60(1), 134-9
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 112:217049

AB Reaction of RC.tplbond.CZNa (I; Z = chalcogen, with I formed in the insertion reaction of RC.tplbond.CNa with Z) with ClCH2Si(OMe)3 afforded RC.tplbond.CZCH2Si(OMe)3 (II) in 20-30% yield for Z = S, Te, and 50% yield for Z = Se. Transetherification of II with N(CH2CH2OH)3 afforded the corresponding silatranes RC.tplbond.CZCH2Si(OCH2CH2)3N in 80-90% yield.

CC 29-6 (Organometallic and Organometalloidal Compounds)

ST chalcogeno silane silatrane deriv

IT Substitution reaction
(of (ethynylchalcogeno)sodium derivs. with (chloromethyl)trimethoxysilane)

IT Metallatranes
RL: SPN (Synthetic preparation); PREP (Preparation)
(silicon, preparation of, in transetherification reaction of [(ethynylchalcogeno)methyl]trimethoxysilanes with triethanolamine)

IT Etherification
(trans-, of [(ethynylchalcogeno)methyl]trimethoxysilanes with triethanolamine, silatranes by)

IT 7704-34-9, Sulfur, reactions 7782-49-2, Selenium, reactions **13494-80-9**, Tellurium, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(insertion reaction of, with sodium acetylides)

IT 127072-65-5P 127072-66-6P 127072-67-7P 127072-68-8P 127072-69-9P 127072-70-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and transetherification of, with triethanolamine)

IT 127072-71-3P 127072-72-4P **127072-73-5P** 127072-74-6P 127072-75-7P **127072-76-8P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

IT 5926-26-1, (Chloromethyl)trimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (ethynylchalcogeno)sodium compds.)

IT 1004-22-4, Sodium phenylacetylide 20360-45-6, Sodium (trimethylsilyl)acetylide
RL: RCT (Reactant); RACT (Reactant or reagent)
(sequential reactions of, with chalcogens and (chloromethyl)trimethoxysilane)

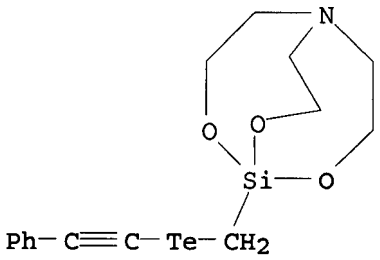
IT 102-71-6, Triethanolamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(transetherification with, of [(ethynylchalcogeno)methyl]trimethoxysilanes)

IT **13494-80-9**, Tellurium, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(insertion reaction of, with sodium acetylides)

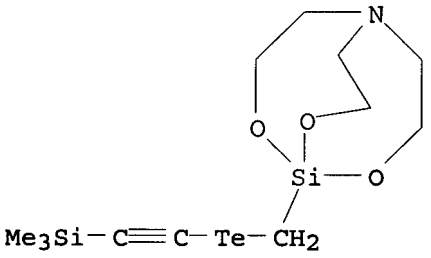
RN 13494-80-9 HCAPLUS
CN Tellurium (8CI, 9CI) (CA INDEX NAME)

Te

IT **127072-73-5P 127072-76-8P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 127072-73-5 HCAPLUS
CN 2,8,9-Trioxa-5-aza-1-silabicyclo[3.3.3]undecane, 1-[[(phenylethynyl)telluro]methyl]- (9CI) (CA INDEX NAME)



RN 127072-76-8 HCAPLUS
CN 2,8,9-Trioxa-5-aza-1-silabicyclo[3.3.3]undecane, 1-[[[(trimethylsilyl)ethynyl]telluro]methyl]- (9CI) (CA INDEX NAME)



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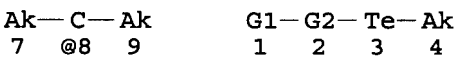
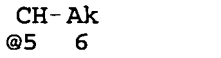
L8 STR

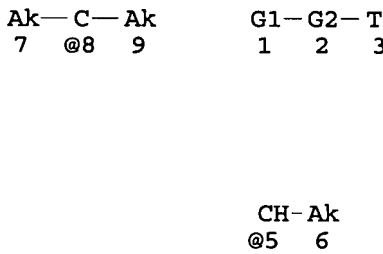




VAR G1=CN/CY
VAR G2=CH2/5/8
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L10 254 SEA FILE=REGISTRY SSS FUL L8
L13 STR



VAR G1=CN/HY
VAR G2=CH2/5/8
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

17 CA references — remaining preparation

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L15 50 SEA FILE=REGISTRY SUB=L10 SSS FUL L13
L16 35 SEA FILE=HCAPLUS ABB=ON L15
L17 21 SEA FILE=HCAPLUS ABB=ON L16(L)PREP/RL
L18 4 SEA FILE=HCAPLUS ABB=ON L17 AND (L4 OR METAL?(2A)(TE OR TELLURIUM))
L19 17 SEA FILE=HCAPLUS ABB=ON L17 NOT L18

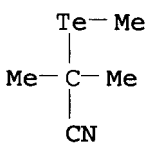
=> D L19 IBIB ABS IND HITSTR 1-17

L19 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:986149 HCAPLUS
DOCUMENT NUMBER: 141:411404
TITLE: Manufacture of organotellurium compounds as living radical polymerization initiators
INVENTOR(S): Yamako, Shigeru; Yoshida, Junichi; Kameshima, Takashi
PATENT ASSIGNEE(S): Otsuka Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

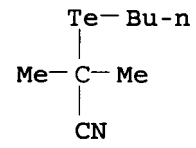
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004323437	A2	20041118	JP 2003-121825	20030425
PRIORITY APPLN. INFO.:			JP 2003-121825	20030425

OTHER SOURCE(S): MARPAT 141:411404
AB The compds. are manufactured by treatment of azo polymerization initiators with R1TeTeR2 (R1, R2 = C1-8 alkyl, aryl, heterocyclic group). Thus, AIBN was

treated with MeTeTeMe to 17% give 2-methyl-2-methyltellanylpropionitrile.
IC ICM C07C395-00
ICS C08F004-00
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 23, 25
ST organotellurium living radical polymn initiator manuf; azo polymn initiator ditelluride substitution; AIBN dimethylditelluride substitution; methyl methyltellanyl propionitrile polymn initiator manuf
IT Tellurides
RL: RCT (Reactant); RACT (Reactant or reagent)
(ditellurides, dialkyl; manufacture of organotellurium compds. as living radical polymerization initiators by treatment of azo polymerization initiators with ditellurides)
IT Polymerization catalysts
(living, radical; manufacture of organotellurium compds. as living radical polymerization initiators by treatment of azo polymerization initiators with ditellurides)
IT 109-72-8, Butyllithium, reactions 591-51-5, Phenyllithium 917-54-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(ditelluride manufactured from; manufacture of organotellurium compds. as living radical polymerization initiators by treatment of azo polymerization initiators with ditellurides)
IT **582319-76-4P 791104-08-0P** 791104-09-1P
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(manufacture of organotellurium compds. as living radical polymerization initiators by treatment of azo polymerization initiators with ditellurides)
IT 20334-43-4P, Dimethyl ditelluride 32294-60-3P, Diphenyl ditelluride 77129-69-2P, Dibutyl ditelluride
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of organotellurium compds. as living radical polymerization initiators by treatment of azo polymerization initiators with ditellurides)
IT 78-67-1, AIBN
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of organotellurium compds. as living radical polymerization initiators by treatment of azo polymerization initiators with ditellurides)
IT **582319-76-4P 791104-08-0P**
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(manufacture of organotellurium compds. as living radical polymerization initiators by treatment of azo polymerization initiators with ditellurides)
RN 582319-76-4 HCAPLUS
CN Propanenitrile, 2-methyl-2-(methyltelluro)- (9CI) (CA INDEX NAME)



RN 791104-08-0 HCAPLUS
CN Propanenitrile, 2-(butyltelluro)-2-methyl- (9CI) (CA INDEX NAME)



L19 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:804053 HCAPLUS
DOCUMENT NUMBER: 142:2572
TITLE: Insight into the Polar Reactivity of the Onium Chalcogen Analogues of S-Adenosyl-L-methionine
AUTHOR(S): Iwig, David F.; Booker, Squire J.
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, The Pennsylvania State University, University Park, PA, 16802, USA
SOURCE: Biochemistry (2004), 43(42), 13496-13509
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:2572

AB S-Adenosyl-L-methionine (AdoMet) is one of Nature's most diverse metabolites, used not only in a large number of biol. reactions but amenable to several different modes of reactivity. The types of transformations in which it is involved include decarboxylation, electrophilic addition to any of the three carbons bonded to the central sulfur atom, proton removal at carbons adjacent to the sulfonium, and reductive cleavage to generate 5'-deoxyadenosyl 5'-radical intermediates. At physiol. pH and temperature, AdoMet is subject to three spontaneous degradation pathways, the first of which is racemization of the chiral sulfonium group, which takes place in a pH-independent manner. The two remaining pathways are pH-dependent and include (1) intramol. attack of the α-carboxylate group onto the γ-carbon, affording L-homoserine lactone (HSL) and 5'-methylthioadenosine (MTA), and (2) deprotonation at C-5', initiating a cascade that results in formation of adenine and S-ribosylmethionine. Herein, we describe pH-dependent stability studies of AdoMet and its selenium and tellurium analogs, Se-adenosyl-L-selenomethionine and Te-adenosyl-L-telluromethionine (SeAdoMet and TeAdoMet, resp.), at 37° and constant ionic strength, which we use as a probe of their relative intrinsic reactivities. We find that with AdoMet intramol. nucleophilic attack to afford HSL and MTA exhibits a pH-rate profile having two titratable groups with apparent pKa values of 1.2±0.4 and 8.2±0.05 and displaying first-order rate consts. of <0.7+10-6 s-1 at pH values less than 0.5, .apprx.3+10-6 s-1 at pH values between 2 and 7, and .apprx.15+10-6 s-1 at pH values greater than 9. Degradation via deprotonation at C-5' follows a pH-rate profile having one titratable group with an apparent pKa value of .apprx.11.5. The selenium analog decays significantly faster via intramol. nucleophilic attack, also exhibiting a pH-rate profile with two titratable groups with pKa values of .apprx.0.86 and 8.0±0.1 with first-order rate consts. of <7+10-6 s-1 at pH values less than 0.9, .apprx.32+10-6 s-1 at pH values between 2 and 7, and .apprx.170+10-6 s-1 at pH values greater than 9. Degradation via deprotonation at C-5' proceeds with one titratable group displaying an apparent pKa value of .apprx.14.1. Unexpectedly, TeAdoMet

did not decay at an observable rate via either of these two pathways. Last, enzymically synthesized AdoMet was found to racemize at rates that were consistent with earlier studies (Hoffman, J. L. (1986) Biochem. 25, 4444-4449); however, SeAdoMet and TeAdoMet did not racemize at detectable rates. In the accompanying paper, we use the information obtained in these model studies to probe the mechanism of cyclopropane fatty acid synthase via use of the onium chalcogens of AdoMet as Me donors.

CC 7-3 (Enzymes)

ST cyclopropane fatty acid synthase adenosylmethionine adenosyltellluromethionine adenosylselenomethionine racemization deprotonation

IT Decarboxylation
Deprotonation
Methyl group
Racemization
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT **797032-25-8P**
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 4053-91-2P 5135-40-0P
RL: BPN (Biosynthetic preparation); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 2185-02-6, L-Homoserine lactone 2457-80-9, 5'-Methylthioadenosine 9036-20-8, Adenosyl methionine decarboxylase 18155-21-0, Sulfonium
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 37256-90-9, Cyclopropane fatty acid synthase
RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 798571-79-6
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 5134-38-3P 29908-03-0P, S-Adenosyl-L-methionine
RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 798571-77-4P
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 9012-52-6, Adenosyl methionine synthetase 9024-82-2, Inorganic pyrophosphatase
RL: CAT (Catalyst use); USES (Uses)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 63-68-3, L-Methionine, reactions 3211-76-5, L-Selenomethionine 798571-76-3 798571-78-5

RL: RCT (Reactant); RACT (Reactant or reagent)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

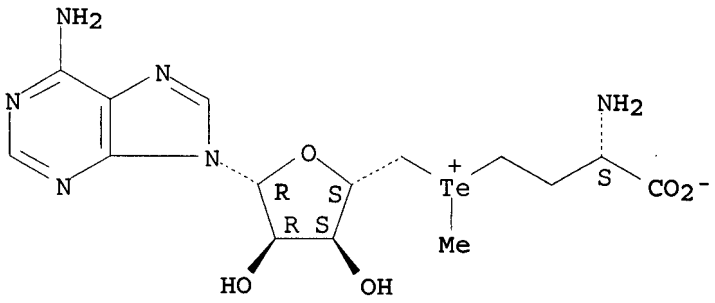
IT 174463-49-1P 798571-75-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT 22365-13-5P 122276-73-7P **877815-23-1P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

IT **797032-25-8P**
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

RN 797032-25-8 HCAPLUS
CN Adenosine, 5'-[[(3S)-3-amino-3-carboxypropyl]methyltelluronio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

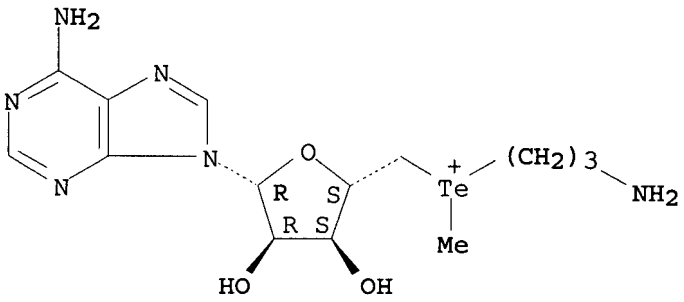
Absolute stereochemistry.



IT **877815-23-1P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(insight into polar reactivity of onium chalcogen analogs of S-Adenosyl-L-methionine)

RN 877815-23-1 HCAPLUS
CN Adenosine, 5'-[(3-aminopropyl)methyltelluronio]-5'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:143097 HCAPLUS
DOCUMENT NUMBER: 140:181980
TITLE: Organic tellurium compounds, preparation thereof, living radical polymerization initiators, and process for producing polymers
INVENTOR(S): Yamago, Shigeru; Yoshida, Junichi
PATENT ASSIGNEE(S): Otsuka Kagaku Kabushiki Kaisha, Japan
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

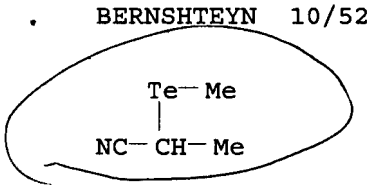
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004014848	A1	20040219	WO 2002-JP8003	20020806
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2494816	AA	20040219	CA 2002-2494816	20020806
AU 2002313917	A1	20040225	AU 2002-313917	20020806
EP 1541550	A1	20050615	EP 2002-753239	20020806
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1649838	A	20050803	CN 2002-829422	20020806
US 2005245714	A1	20051103	US 2005-523824	20050204
PRIORITY APPLN. INFO.:			WO 2002-JP8003 W	20020806

OTHER SOURCE(S): MARPAT 140:181980

AB Organotellurium compds. R1TeCR2R3R4 [R1 = C1-8 alkyl; R2, R3 = H, C1-8 alkyl; R4 = (un)substituted aryl, aromatic heterocyclic group, oxycarbonyl, cyano] are prepared and used as living radical polymerization initiators. The initiators enable precise control of mol. weight and mol.-weight distribution under mild conditions. Thus, polystyrene (Mn 18,400, Mw/Mn 1.18) was prepared by using (1-methyltelluranylethyl)benzene as catalyst.

IC ICM C07C395-00
ICS C08F004-00; C08F297-00
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 29, 67
ST organo tellurium compd living polymn catalyst styrene
IT Polymerization catalysts
(living, radical; organotellurium compds. as living radical polymerization catalysts for preparation of polymers and living polymers)
IT Polymerization
(living; organotellurium compds. as living radical polymerization catalysts for preparation of polymers and living polymers)
IT Polymers, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(living; organotellurium compds. as living radical polymerization catalysts

for preparation of polymers and living polymers)
IT Conducting polymers
(polypyrroles; organotellurium compds. as living radical polymerization catalysts for preparation of polymers and living polymers)
IT Conducting polymers
(polythiophenes; organotellurium compds. as living radical polymerization catalysts for preparation of polymers and living polymers)
IT 103680-41-7P 121335-32-8P 415679-75-3P 474094-06-9P 658058-30-1P **659735-45-2P**
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(organotellurium compds. as living radical polymerization catalysts for preparation
of polymers and living polymers)
IT 124-38-9DP, Carbon dioxide, reaction products with living polystyrene 6180-99-0DP, Stannane-d, tributyl-, reaction products with living polystyrene 9003-21-8P, Methyl acrylate homopolymer 9003-49-0P, Butyl acrylate homopolymer 9003-53-6P, Polystyrene 24936-44-5P, Poly(p-methoxystyrene) 24991-47-7P, Poly(p-chlorostyrene) 25988-40-3P 26793-34-0P, N,N-Dimethylacrylamide homopolymer 67000-89-9DP, 1-Pyrenebutanol, reaction products with carboxy-terminated polystyrene 108286-71-1DP, reaction products with living polystyrene 120326-29-6P 127972-36-5P, tert-Butyl acrylate-styrene block copolymer
RL: IMF (Industrial manufacture); PREP (Preparation)
(organotellurium compds. as living radical polymerization catalysts for preparation
of polymers and living polymers)
IT 1918-82-7P, 2-Vinylthiophene 2540-06-9P 14804-61-6P, 1-(1-Bromoethyl)-4-chlorobenzene
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(organotellurium compds. as living radical polymerization catalysts for preparation
of polymers and living polymers)
IT 98-03-3, 2-Thiophenealdehyde 100-44-7, Benzyl chloride, reactions 600-00-0, Ethyl 2-bromoisobutyrate 1192-58-1 17435-72-2, Ethyl-2-bromomethyl acrylate 38131-57-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(organotellurium compds. as living radical polymerization catalysts for preparation
of polymers and living polymers)
IT 3391-10-4P, 1-(4-Chlorophenyl)ethanol
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of organotellurium compds. as living radical polymerization catalysts)
IT 99-91-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of organotellurium compds. as living radical polymerization catalysts)
IT **659735-45-2P**
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
(organotellurium compds. as living radical polymerization catalysts for preparation
of polymers and living polymers)
RN 659735-45-2 HCAPLUS
CN Propanenitrile, 2-(methyltelluro)- (9CI) (CA INDEX NAME)

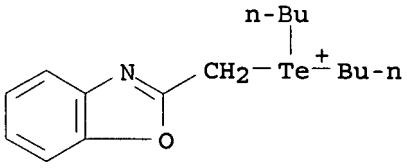


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:414099 HCAPLUS
DOCUMENT NUMBER: 137:262774
TITLE: A facile synthesis of benzoxazolyl cyclopropanes
AUTHOR(S): Shao, Jian Guo; Wang, Pei Yu; Zheng, Ming; Zhong, Qi
CORPORATE SOURCE: Department of Chemistry, Yangzhou University, Yangzhou, 225002, Peop. Rep. China
SOURCE: Chinese Chemical Letters (2002), 13(5), 407-409
CODEN: CCLEE7; ISSN: 1001-8417
PUBLISHER: Chinese Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:262774

AB 2'-Benzoxazolyl substituted cyclopropane derivs. were synthesized in yields of 73-89% from the cycloaddn. of telluronium ylides with chalcones.

CC 24-2 (Alicyclic Compounds)
ST cycloaddn telluronium ylide chalcone prepn benzoxazolyl cyclopropane
IT Cycloaddition reaction
(preparation of benzoxazolylcyclopropanes by cycloaddn. of telluronium ylides with chalcones)
IT Ylides
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of benzoxazolylcyclopropanes by cycloaddn. of telluronium ylides with chalcones)
IT 94-41-7, Chalcone 956-02-5, 1-(4-Chlorophenyl)-3-phenyl-2-propen-1-one 959-23-9, 1-(4-Methoxyphenyl)-3-phenyl-2-propen-1-one 1608-51-1 1774-66-9, 3-(4-Bromophenyl)-1-phenyl-2-propen-1-one 2965-63-1 4224-87-7, 3-(4-Methylphenyl)-1-phenyl-2-propen-1-one 19672-59-4, 1,3-Bis(4-Chlorophenyl)-2-propen-1-one 19672-61-8 38788-38-4, Dibutyl telluride 41014-43-1, 2-Chloromethylbenzoxazole 92873-00-2, 3-(4-Bromophenyl)-1-(4-methoxyphenyl)-2-propen-1-one
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of benzoxazolylcyclopropanes by cycloaddn. of telluronium ylides with chalcones)
IT **144334-54-3P**, (2-Benzoxazolylmethyl)dibutyltelluronium chloride
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of benzoxazolylcyclopropanes by cycloaddn. of telluronium ylides with chalcones)
IT 462653-15-2P 462653-16-3P 462653-17-4P 462653-18-5P 462653-19-6P 462653-20-9P 462653-21-0P 462653-22-1P 462653-23-2P 462653-24-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of benzoxazolylcyclopropanes by cycloaddn. of telluronium ylides with chalcones)
IT **144334-54-3P**, (2-Benzoxazolylmethyl)dibutyltelluronium chloride
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of benzoxazolylcyclopropanes by cycloaddn. of telluronium ylides with chalcones)
RN 144334-54-3 HCAPLUS
CN Telluronium, (2-benzoxazolylmethyl)dibutyl-, chloride (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:499952 HCAPLUS
DOCUMENT NUMBER: 131:271939
TITLE: Toward Novel Antioxidants: Preparation of Dihydrotellurophenes and Selenophenes by Alkyltelluride-Mediated Tandem SRN1/SHi Reactions
AUTHOR(S): Engman, Lars; Laws, Melissa J.; Malmstroem, Jonas; Schiesser, Carl H.; Zugaro, Lisa M.
CORPORATE SOURCE: Institute of Chemistry Department of Organic Chemistry, Uppsala University, Uppsala, S-751 21, Swed.
SOURCE: Journal of Organic Chemistry (1999), 64(18), 6764-6770
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Reaction of 1-(2-iodophenyl)-1-methyloxirane (12) with 2 equiv of Na n-butyltellurolate (BuTeNa), generated by the Na borohydride reduction of di-Bu ditelluride, in THF, affords 2,3-dihydro-3-hydroxy-3-methylbenzo[b]tellurophene (13) in 62% yield, together with a small quantity of 1-(n-butyltelluro)-2-phenyl-2-propanol (27). This transformation presumably involves a tandem SRN1/SHi sequence. Similar reactions of 1-(benzylseleno)-2-phenyl-2-propanol (5a, R = Me) and 1-allyloxy-2-iodobenzene (15) afforded 2,3-dihydro-3-hydroxy-3-methylbenzo[b]selenophene (17, 74%), and 3-(n-butyltelluro)methyl-2,3-dihydrobenzo[b]furan (18, 50%), resp. Li alkyltellurolates, generated by direct Te insertion into the required alkyllithium, or sec-Bu or tert-Bu substitution on Te provide product distributions similar to those observed for reactions involving BuTeNa. Li or Na phenyltellurolate returned only starting materials from these reaction mixts. The 2-[2-(n-butyltelluro)-1-hydroxy-1-methyl]ethylphenyl radical (14) is estimated to cyclize with kc = 5 + 108 s-1 at 25°. The tandem SRN1/SHi sequence was applied to the preparation of the antioxidant analogs, 5-hydroxy-2,3-dihydrobenzo[b]tellurophene and selenophene.

CC 29-8 (Organometallic and Organometalloidal Compounds)
ST selenophene alkyltelluride mediated tandem nucleophilic addn; tellurophene alkyltelluride mediated tandem nucleophilic addn
IT Radicals, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(aryl; kinetics of radical ring closure reaction of aryl selenyl and tellanyl radicals with sodium butyltellurate)

IT Antioxidants
Cyclization
Insertion reaction
(synthesis of antioxidants via dihydrotellurophenes and selenophenes by alkyltelluride-mediated tandem nucleophilic reactions)

IT 18162-48-6, tert-Butylchlorodimethylsilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction with hydroxyphenylacetate)

IT 22446-38-4, Ethyl 3-hydroxyphenylacetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydroxy group-protection and reduction of)

IT 24892-63-5 41876-99-7 72525-47-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(kinetics of radical ring closure reaction with sodium butyltellurate)

IT 144427-99-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(kinetics of reaction with sodium butyltellurate)

IT 245442-85-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(kinetics of ring closure reaction of)

IT 245442-92-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization reaction in the presence of selenium and tellurium reagents to give benzoselenophene and benzotellurophene products)

IT 245442-93-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization reaction in the presence of tellurium reagents to give benzotellurophene product)

IT 245442-94-8P 245442-95-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and desilylation reaction)

IT 245442-84-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and iodination of)

IT 245442-83-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and iodination reaction of)

IT 160701-58-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and iodination reactions of)

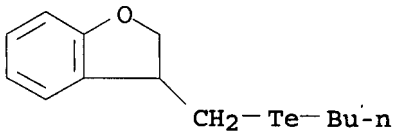
IT 144428-00-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with sodium butyltellurate)

IT 245442-82-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)

IT 272-35-5P, Benzo[b]tellurophene 26059-40-5P 35783-95-0P 72925-56-5P
200068-17-3P 200068-18-4P **245442-86-8P** 245442-87-9P
245442-88-0P 245442-89-1P 245442-90-4P 245442-91-5P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

IT 144428-06-8
RL: RCT (Reactant); RACT (Reactant or reagent)

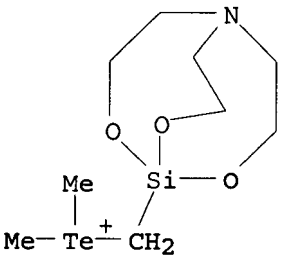
(reaction with sodium butyltellurate)
IT 2966-50-9, Silver trifluoroacetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reagent with iodine for the iodination of aryl ether)
IT 77129-69-2, Dibutyl ditelluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(sequential metalation and reactions with aryl iodides)
IT **245442-86-8P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 245442-86-8 HCAPLUS
CN Benzofuran, 3-[(butyltelluro)methyl]-2,3-dihydro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:202421 HCAPLUS
DOCUMENT NUMBER: 130:282122
TITLE: Reaction of methyl iodide with organoethynyl silatranylmethyl chalcogenides
AUTHOR(S): Sorokin, M. S.; Voronkov, M. G.; Lopyrev, V. A.
CORPORATE SOURCE: Irkutsk Institute of Chemistry, Siberian Branch, Russian Academy of Sciences, Irkutsk, 664033, Russia
SOURCE: Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya) (1998), 47(12), 2467-2469
CODEN: RCBUEY; ISSN: 1066-5285
PUBLISHER: Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The reactivity of organoethynyl silatranylmethyl chalcogenides RC.tplbond.CYCH2Si(OCH2CH2)3N (R = Ph, Me3Si; Y = S, Se, Te) in the reaction with Me iodide depending on the nature of the chalcogen Y, the substituent R at the triple bond, and the reaction conditions was studied. Thus, reaction of RC.tplbond.CTeCH2Si(OCH2CH2)3N (R = Ph, Me3Si) with Me iodide gave I-(Me)(RC.tplbond.C)Te+CH2Si(OCH2CH2)3N.
CC 29-8 (Organometallic and Organometalloidal Compounds)
ST methyl iodide reaction organo ethynyl silatranylmethyl chalcogenide
IT 111080-00-3P **120220-00-0P 222629-86-9P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT 74-88-4, Methyl iodide, reactions 127072-73-5 127072-75-7 127072-76-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of Me iodide with organoethynyl silatranylmethyl chalcogenides)
IT **222629-85-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(reaction of Me iodide with organoethynyl silatranylmethyl chalcogenides)

IT **120220-00-0P 222629-86-9P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 120220-00-0 HCAPLUS
CN Telluronium, dimethyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



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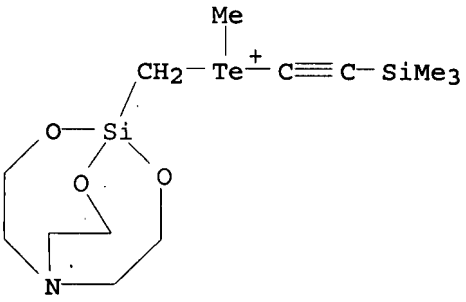
RN 222629-86-9 HCAPLUS
CN Telluronium, methyl[(trimethylsilyl)ethynyl](2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



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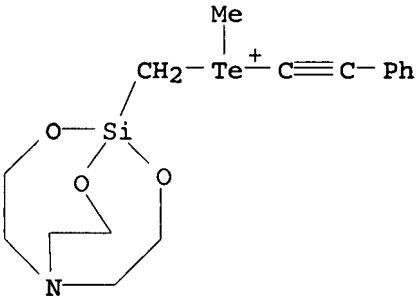
IT **222629-85-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(reaction of Me iodide with organoethynyl silatranylmethyl chalcogenides)
RN 222629-85-8 HCAPLUS
CN Telluronium, methyl(phenylethynyl)(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



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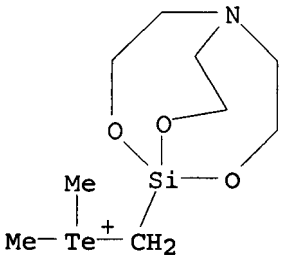
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:178451 HCAPLUS
DOCUMENT NUMBER: 130:282100
TITLE: Reaction of thiophenol with 1-(phenylethynyltelluriomethyl)silatrane
AUTHOR(S): Sorokin, M. S.; Lopyrev, V. A.; Voronkov, M. G.
CORPORATE SOURCE: Irkutsk Institute of Chemistry, Siberian Division, Russian Academy of Sciences, Irkutsk, Russia
SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (1998), 68(8), 1338-1339
CODEN: RJGCEK; ISSN: 1070-3632
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The title reaction gave 94% 1-(phenylthiotelluriomethyl)silatrane, which, with MeI gave 80% dimethyl(silatranylmethyl)telluronium iodide.
CC 29-6 (Organometallic and Organometalloidal Compounds)
ST thiophenol reaction phenylethynyltelluriomethylsilatrane; silatrane phenylthiotelluriomethyl prepn
IT **120220-00-0P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT 108-98-5, Thiophenol, reactions 222982-99-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of thiophenol with (phenylethynyltelluriomethyl)silatrane)
IT **120220-00-0P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 120220-00-0 HCAPLUS
CN Telluronium, dimethyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



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REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:76980 HCAPLUS
DOCUMENT NUMBER: 126:104170
TITLE: Reduction of Organotellurium Trichlorides with Sodium Borohydride
AUTHOR(S): Chieffi, Andre; Menezes, Paulo H.; Comasseto, Joao V.
CORPORATE SOURCE: Instituto de Quimica, Universidade de Sao Paulo, Sao Paulo, 05599-970, Brazil
SOURCE: Organometallics (1997), 16(4), 809-811
CODEN: ORGND7; ISSN: 0276-7333
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 126:104170

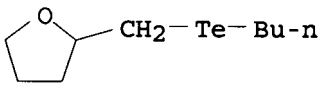
AB Organotellurium trichlorides, e.g., PhTeCl3, are efficiently reduced with Na borohydride. The intermediate organo tellurolates are transformed into diaryl ditellurides, e.g., PhTeTePh, alkyl aryl tellurides, tellurides containing a cyclic ether, and vinylic tellurides.

CC 29-8 (Organometallic and Organometalloidal Compounds)
ST redn organotellurium trichloride borohydride; ditelluride phenyl alkyl vinylic prepn; ether cyclic telluride prepn
IT Reduction
(preparation of tellurides by reduction of organotellurium trichlorides with sodium borohydride)
IT 74-88-4, Methyl iodide, reactions 74-96-4, Ethyl bromide 107-81-3, 2-Bromopentane 109-65-9, Butyl bromide 501-65-5, Diphenylacetylene 536-74-3, Phenylacetylene 673-32-5, 1-Phenyl-1-propyne 821-09-0, 4-Penten-1-ol 821-41-0, 5-Hexen-1-ol 29510-67-6, Trichlorophenyltellurium 36062-75-6 36309-68-9 36310-31-3 36310-34-6 186034-55-9 186034-57-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of tellurides by reduction of organotellurium trichlorides with sodium borohydride)
IT 121445-15-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tellurides by reduction of organotellurium trichlorides with sodium borohydride)
IT 32294-60-3P, Diphenyl ditelluride 35684-37-8P 35684-38-9P 35684-39-0P 36062-88-1P 55776-34-6P, Ethyl phenyl telluride

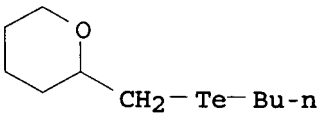
66697-24-3P 72903-51-6P 78984-36-8P, 4-Methoxyphenyl methyl telluride
119276-79-8P, Ethyl 4-methoxyphenyl telluride 186034-37-7P
186034-39-9P **186034-41-3P 186034-43-5P**
186034-45-7P 186034-48-0P 186034-50-4P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of tellurides by reduction of organotellurium trichlorides with sodium borohydride)

IT **186034-41-3P 186034-43-5P 186034-45-7P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of tellurides by reduction of organotellurium trichlorides with sodium borohydride)

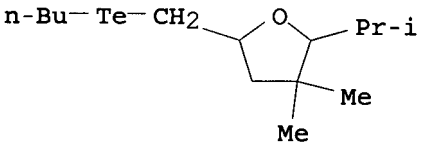
RN 186034-41-3 HCAPLUS
CN Furan, 2-[(butyltelluro)methyl]tetrahydro- (9CI) (CA INDEX NAME)



RN 186034-43-5 HCAPLUS
CN 2H-Pyran, 2-[(butyltelluro)methyl]tetrahydro- (9CI) (CA INDEX NAME)



RN 186034-45-7 HCAPLUS
CN Furan, 5-[(butyltelluro)methyl]tetrahydro-3,3-dimethyl-2-(1-methylethyl)- (9CI) (CA INDEX NAME)



L19 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:655921 HCAPLUS
DOCUMENT NUMBER: 121:255921
TITLE: Generation of allyl- and benzyllithiums from the corresponding halides by the aid of lithium-tellurium exchange reactions
AUTHOR(S): Kanda, Takahiro; Kato, Shinzi; Sugino, Takushi; Kambe, Nobuaki; Sonoda, Noboru
CORPORATE SOURCE: Department of Chemistry, Faculty of Engineering, Gifu University, Yanagido 1-1, Gifu, 501-11, Japan
SOURCE: Journal of Organometallic Chemistry (1994), 473(1-2), 71-83
CODEN: JORCAI; ISSN: 0022-328X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 121:255921
AB A variety of allyl- and benzyllithiums were prepared by lithium-tellurium

exchange reactions of allylic and benzylic tellurides generated in situ from the corresponding halides. The produced organolithiums were trapped successfully with electrophiles such as aldehydes, ketones, and trimethylchlorosilane. Benzyllithiums having an alkyl, alkoxy, fluoro, chloro, or cyano substituent(s) on their aromatic ring were generated efficiently in THF. Benzylic tellurides bearing a bromo or iodo substituent afforded a mixture of products under similar conditions arising from the competing lithium-halogen exchange and/or the displacement of the halogen atom with organolithiums used, but they were converted selectively to benzyllithiums in ether without affecting halogen substituents on the benzene ring. Several allyllithiums including dilithioisobutene were generated from allylic halides in a similar way via allylic tellurides. Wurtz-type coupling was negligible in any reactions examined

CC 29-8 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 21

ST allyllithium generation reaction electrophile; benzyllithium generation reaction electrophile; lithium tellurium exchange allyl benzyl; telluride allylic benzylic lithium exchange; electrophile reaction allyllithium benzyllithium

IT Aldehydes, reactions
Ketones, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with allyl- and benzyllithiums)

IT Metalation
(trans-, of allylic and benzylic tellurides with lithium)

IT 158526-73-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and transmetalation of, with lithium)

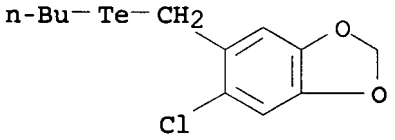
IT 606-97-3P 611-14-3P 614-29-9P 13397-96-1P 18282-40-1P
19829-56-2P 23092-23-1P 27644-02-6P 27644-03-7P 38610-96-7P
51554-95-1P 52922-10-8P 52922-19-7P 59485-34-6P 71370-00-8P
71521-86-3P 75851-77-3P 99857-93-9P 107054-71-7P 110349-15-0P
141819-15-0P 141819-16-1P 141819-17-2P 141819-18-3P 158526-50-2P
158526-51-3P 158526-52-4P 158526-53-5P 158526-54-6P 158526-55-7P
158526-56-8P 158526-57-9P 158526-58-0P 158526-74-0P 158526-75-1P
158526-76-2P 158526-77-3P 158526-78-4P 158526-79-5P 158526-80-8P
158526-81-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 110935-05-2P 141819-11-6P 141819-12-7P 141819-13-8P 141819-14-9P
158526-59-1P 158526-60-4P **158526-61-5P** 158526-62-6P
158526-63-7P 158526-64-8P 158526-65-9P 158526-66-0P 158526-67-1P
158526-68-2P 158526-69-3P 158526-70-6P 158526-71-7P 158526-72-8P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation, transmetalation with lithium, and subsequent reaction of, with electrophiles)

IT 75-97-8, Pinacolone 100-52-7, Benzaldehyde, reactions 119-61-9, Benzophenone, reactions 123-72-8, Butyraldehyde 6728-26-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with allyl- and benzyllithiums)

IT 100-39-0, Benzyl bromide 104-81-4, p-Xylyl bromide 104-83-6, 4-Chlorobenzyl chloride 459-46-1, 4-Fluorobenzyl bromide 563-47-3 585-71-7, (1-Bromoethyl)benzene 589-15-1, 4-Bromobenzyl bromide 611-19-8, 2-Chlorobenzyl chloride 823-78-9, 3-Bromobenzyl bromide 824-94-2, 4-Methoxybenzyl chloride 870-63-3 1871-57-4 3433-80-5, 2-Bromobenzyl bromide 4894-61-5 17201-43-3, 4-Cyanobenzyl bromide 22115-41-9, 2-Cyanobenzyl bromide 23468-31-7 28188-41-2, 3-Cyanobenzyl bromide 59473-45-9, 2-Iodobenzyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)

(tellurylation of)
IT **158526-61-5P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation, transmetalation with lithium, and subsequent reaction of, with electrophiles)
RN 158526-61-5 HCAPLUS
CN 1,3-Benzodioxole, 5-[(butyltelluro)methyl]-6-chloro- (9CI) (CA INDEX NAME)



L19 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:298774 HCAPLUS
DOCUMENT NUMBER: 120:298774
TITLE: 125Te Nuclear Magnetic Resonance Study and X-ray Crystal Structures of Organotelluronium Salts
AUTHOR(S): Zhou, Zhang-Lin; Huang, Yao-Zeng; Tang, Yong; Chen, Zhao-Huan; Shi, Li-Ping; Jin, Xiang-Lin; Yang, Qing-Chuan
CORPORATE SOURCE: Shanghai Institute of Organic Chemistry, Academia Sinica, Shanghai, 200032, Peop. Rep. China
SOURCE: Organometallics (1994), 13(5), 1575-81
CODEN: ORGND7; ISSN: 0276-7333
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The proton-noise-decoupled tellurium-125 NMR spectra of a series of organotelluronium salts R2Te+R' X- are reported, including the precursors of nonstabilized, semistabilized, and stabilized telluronium ylides [R = n-Bu, iso-Bu, Me, and Ph; R' = CnH2n+1 (n = 1-6), Ph, CH2CH:CH2, CH2C.tplbond.CSiMe3, CH2CH:CHSiMe3, CH2CH:CHCO2Et, CH2CO2CH3, CH2CO2C2H5, CH2CONHBu-i, CH2CON(CH2)3CH2, CH2CON(CH2)4CH2, CH2CN; X = Cl, Br, I, and BPh4]. The 125Te NMR chemical shifts are measured in CDCl3, DMSO-d6, or solution relative to neat Me2Te and range from 418 ppm for (CH3)3Te+ I- to 675 ppm for (C6H5)2Te+CH3 -BPh4. The coupling consts. of Te-C and Te-H of several telluronium salts are also reported. Furthermore, X-ray crystal structures of (CH3)2Te+CH3 I-, i-Bu2Te+C6H5 Br-, and (C6H5)2Te+CH3 -BPh4 are reported.
CC 29-8 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 75
ST tellurium 125 NMR organotelluronium salt; telluronium salt tellurium 125 NMR; crystal structure organotelluronium salt; mol structure organotelluronium salt
IT Spin, nuclear coupling
(carbon-13- and proton-tellurium-125, in organotelluronium salts)
IT Crystal structure
Molecular structure
(of organotelluronium salts)
IT Nuclear magnetic resonance
(of organotelluronium salts, tellurium-125)
IT 41384-85-4P, Telluronium, dibutylmethyl-, iodide 111873-48-4P **111873-50-8P**, Telluronium, dibutyl(cyanomethyl)-, chloride 113449-25-5P 132356-17-3P, Telluronium, bis(2-methylpropyl)(2-propenyl)-, bromide 133505-33-6P 134988-30-0P, Telluronium,

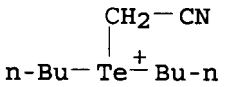
dibutyl(phenylmethyl)-, bromide **142907-33-3P**, Telluronium, (cyanomethyl)bis(2-methylpropyl)-, chloride 142907-34-4P, Telluronium, bis(2-methylpropyl)(2-propenyl)-, chloride **142907-36-6P**, Telluronium, dibutyl(cyanomethyl)-, bromide 142907-39-9P, Telluronium, bis(2-methylpropyl)[3-(trimethylsilyl)-2-propenyl]-, bromide **142907-41-3P**, Telluronium, dibutyl(cyanomethyl)-, iodide 142907-42-4P, Telluronium, bis(2-methylpropyl)(2-propenyl)-, iodide 142907-43-5P, Telluronium, tributyl-, iodide 142907-44-6P, Telluronium, dibutylhexyl-, iodide **142907-46-8P** 142907-48-0P 142907-52-6P 142907-54-8P 142907-56-0P 143798-87-2P, Telluronium, bis(2-methylpropyl)[3-(trimethylsilyl)-2-propynyl]-, bromide 154667-16-0P 154667-17-1P 154667-18-2P 154667-19-3P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation and tellurium-125 NMR spectra of)

IT 18987-26-3P, Telluronium, trimethyl-, iodide 130318-72-8P 142907-35-5P, Telluronium, bis(2-methylpropyl)phenyl-, bromide
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, crystal structure, and tellurium-125 NMR spectra of)

IT 12586-59-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(spin, carbon-13- and proton-tellurium-125, in organotelluronium salts)

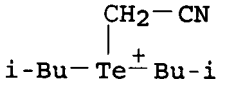
IT **111873-50-8P**, Telluronium, dibutyl(cyanomethyl)-, chloride **142907-33-3P**, Telluronium, (cyanomethyl)bis(2-methylpropyl)-, chloride **142907-36-6P**, Telluronium, dibutyl(cyanomethyl)-, bromide **142907-41-3P**, Telluronium, dibutyl(cyanomethyl)-, iodide **142907-46-8P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation and tellurium-125 NMR spectra of)

RN 111873-50-8 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, chloride (9CI) (CA INDEX NAME)



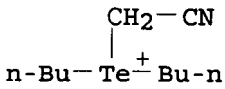
● Cl^-

RN 142907-33-3 HCAPLUS
CN Telluronium, (cyanomethyl)bis(2-methylpropyl)-, chloride (9CI) (CA INDEX NAME)



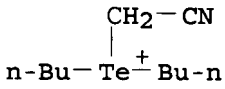
● Cl^-

RN 142907-36-6 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, bromide (9CI) (CA INDEX NAME)



● Br^-

RN 142907-41-3 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, iodide (9CI) (CA INDEX NAME)

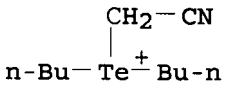


● I^-

RN 142907-46-8 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)

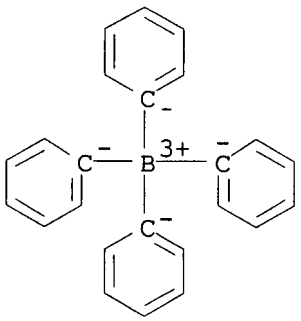
CM 1

CRN 142907-45-7
CMF C10 H20 N Te



CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



L19 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:255738 HCAPLUS
DOCUMENT NUMBER: 116:255738
TITLE: Decomposition and reactivity of tellurium alkyls in the liquid and gas phases; dihex-5-enyltellurium and dipent-4-enyltellurium as mechanistic probes
AUTHOR(S): Bell, William; McQueen, Ewan D.; Walton, John C.; Foster, Douglas F.; Cole-Hamilton, David J.; Hails, Janet E.
CORPORATE SOURCE: Chem. Dep., Univ. St. Andrews, St. Andrews/Fife, KY16 9ST, UK
SOURCE: Journal of Crystal Growth (1992), 117(1-4), 58-66
CODEN: JCRGAE; ISSN: 0022-0248
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 116:255738

AB The new tellurium alkyls dihex-5-enyltellurium (I) and dipent-4-enyltellurium (II) were prepared and pyrolyzed in the gas and liquid phases. In the liquid phase, some decomposition occurs at 200° but the main isolated products are the tellurium alkyls, bis(cyclopentylmethyl)tellurium and 2-methyltelluracyclopentane resp. A further product, cyclopentylmethylhex-5-enyltellurium, is observed as an intermediate in the rearrangement of I, while (2-telluracyclopentylmethyl)pent-4-enyltellurium together with pent-1-ene and 1,4-pentadiene is obtained from II. These products are interpreted as providing direct evidence for initial homolytic cleavage of the Te-C bonds followed by cyclization of some of the formed radicals and radical chain reactions. In the gas phase, at 500° similar products to those obtained in the liquid phase are formed from II, although not compds. containing more than one Te atom. I, however, decomps. completely in the gas phase at 700° to give a mixture of hydrocarbons. Substantial quantities of methylcyclopentane and methylenecyclopentane again confirm that a free radical pathway makes a major contribution to the mechanism. The origin of the other products, especially cyclohexene (the major C6 product) and cyclohexane is also interpreted in terms of a free radical mechanism leading to the 6-tellurahex-1-enyl radical which cyclizes to give the 3-telluracycloheptyl radical. This radical rearranges to cyclohexyl Te• which in turn acts as the source of cyclohexene and cyclohexane by H• abstraction or addition There is little evidence that mechanisms other than free radical operate for decomposition of these metal alkyls.

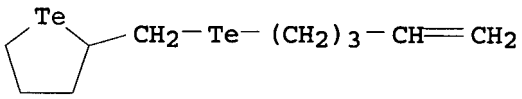
CC 29-8 (Organometallic and Organometalloidal Compounds)
ST tellurium alkyl prepn thermolysis; hexenyl pentenyl tellurium thermal decompn
IT Thermal decomposition
(of dihexenyl- and dipentenyltellurium)
IT 96-37-7P, Methylcyclopentane 109-67-1P, 1-Pentene 110-82-7P, Cyclohexane, preparation 110-83-8P, Cyclohexene, preparation 591-93-5P, 1,4-Pentadiene 592-41-6P, 1-Hexene, preparation 592-42-7P, 1,5-Hexadiene 1528-30-9P, Methylenecyclopentane 125946-20-5P 141582-30-1P **141582-31-2P**
RL: FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, in thermolysis of tellurium alkyls)
IT 1119-51-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 141582-28-7 141582-29-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation thermolysis of, mechanism of)
IT 2695-47-8, 6-Bromo-1-hexene 142399-07-3, 5-Bromo-1-pentene

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium telluride)

IT **141582-31-2P**
RL: FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, in thermolysis of tellurium alkyls)

RN 141582-31-2 HCAPLUS

CN Tellurophene, tetrahydro-2-[(4-pentenyltelluro)methyl]- (9CI) (CA INDEX NAME)



L19 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:582776 HCAPLUS
DOCUMENT NUMBER: 115:182776
TITLE: Synthetic application of elemento-organic compounds of the 15th and 16th Groups. 92. Novel reaction of dibutyl(cyanomethyl)telluronium chloride with carbonyl compounds mediated by organolithium reagents: highly efficient synthesis of β-hydroxy nitriles
AUTHOR(S): Zhou, Zhanglin; Shi, Linlan; Huang, Yao Zeng
CORPORATE SOURCE: Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, 200032, Peop. Rep. China
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1991), (8), 1931-3
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 115:182776

AB Dibutyl(cyanomethyl)telluronium chloride, a precursor of stabilized telluronium ylides, after being treated with organolithium reagents reacted with carbonyl compds. to afford β-hydroxy nitriles instead of α,β-unsatd. nitriles in excellent yields. Thus, reaction of Bu2Te+CH2CNCl- with BuLi in THF-hexane followed by treatment with PhCHO and hydrolysis gave 95% PhC(OH)CH2CN.

CC 25-20 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 23

ST dibutylcyanomethyltelluronium chloride prepn lithiation reaction carbonyl; carbonyl compd reaction lithiated cyanomethyltelluronium chloride; hydroxy nitrile; tellurium ylide prepn reaction carbonyl compd

IT Carbonyl compounds, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with lithiated dibutyl(cyanomethyl)telluronium chloride, hydroxynitriles by)

IT Nitriles, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(hydroxy, preparation of, by reaction of lithiated dibutyl(cyanomethyl)telluronium chloride with carbonyl compds.)

IT Ylides
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(telluronium, preparation and reaction of, with carbonyl compds., hyroxynitriles by)

IT **111873-50-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP**

(Preparation); RACT (Reactant or reagent)
(preparation and sequential reaction of, with organolithium compound and carbonyl compds., hydroxynitriles by)

IT 38788-38-4, Dibutyl telluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloroacetonitrile)

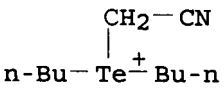
IT 107-14-2, Chloroacetonitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with di-Bu telluride)

IT 109-72-8, Butyllithium, reactions 591-51-5, Phenyllithium 917-54-4, Methyllithium 2417-95-0, 4-Methylphenyllithium
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dibutyl(cyanomethyl)telluronium chloride)

IT 66-25-1, Hexanal 66-99-9, 2-Naphthylcarboxaldehyde 89-98-5, 2-Chlorobenzaldehyde 98-86-2, Methyl phenyl ketone, reactions 100-10-7, 4-Dimethylaminobenzaldehyde 100-52-7, Benzaldehyde, reactions 104-88-1, 4-Chlorobenzaldehyde, reactions 119-61-9, Diphenyl ketone, reactions 120-57-0, 1,3-Benzodioxole-5-carboxaldehyde 123-11-5, 4-Methoxybenzaldehyde, reactions 123-72-8, Butanal 459-57-4, 4-Fluorobenzaldehyde 613-45-6, 2,4-Dimethoxybenzaldehyde 1122-91-4, 4-Bromobenzaldehyde 2043-61-0, Cyclohexylcarboxaldehyde 3531-23-5 14368-31-1 17190-29-3 24951-13-1 51241-26-0 51241-27-1 51241-28-2 64250-18-6 65984-59-0 84466-38-6 84466-39-7 84466-41-1 126678-67-9 128104-67-6 136568-65-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with lithiated dibutyl(cyanomethyl)telluronium chloride, hydroxynitrile by)

IT **111873-50-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP**
(Preparation); RACT (Reactant or reagent)
(preparation and sequential reaction of, with organolithium compound and carbonyl compds., hydroxynitriles by)

RN 111873-50-8 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, chloride (9CI) (CA INDEX NAME)



L19 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:206702 HCAPLUS
DOCUMENT NUMBER: 114:206702
TITLE: Organotellurium ylide reactions. Part II. Synthesis of 2,4-conjugated unsaturated ketones, esters and nitriles
AUTHOR(S): Zhong, Qi; Liu, Changqing; Shao, Jianguo
CORPORATE SOURCE: Dep. Chem., Yangzhou Norm. Coll., Yangzhou, 225002, Peop. Rep. China
SOURCE: Youji Huaxue (1991), 11(1), 58-63
CODEN: YCHHDX; ISSN: 0253-2786
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
OTHER SOURCE(S): CASREACT 114:206702

AB A convenient procedure for the synthesis of 2,4-conjugated unsatd. ketones, esters and nitriles by the condensation of telluronium salts Bu2Te+CH2RX- (R = Bz, substituted Bz; X = Br, Cl) with R1CH:CHCHO (R1 = Ph, substituted Ph) is reported. The yields are 85 .apprx. 96%. All products are the E,E-isomers as confirmed by their m.p., IR and 1H NMR spectra. Effect of solvents and bases on the condensation are studied. The reaction is likely to proceed with telluronium ylides as intermediates.

CC 25-20 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 21, 29

ST ketone conjugated unsatd; ester conjugated unsatd; nitrile conjugated unsatd; telluronium ylide condensation stereoselective cinnamaldehyde

IT Ketones, preparation
Nitriles, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(2,4-conjugated, preparation of, from cinnamaldehydes and telluronium salts)

IT Stereochemistry
(of condensation of telluronium ylides with cinnamaldehydes)

IT Condensation reaction
(of telluronium ylides with cinnamaldehydes, stereochem. of)

IT Ylides
RL: RCT (Reactant); RACT (Reactant or reagent)
(telluronium, condensation of, with cinnamaldehydes, stereochem. of)

IT Carboxylic acids, esters
RL: SPN (Synthetic preparation); PREP (Preparation)
(conjugated, esters, preparation of, from cinnamaldehydes and telluronium salts)

IT 14371-10-9 24680-50-0 49678-02-6 49678-08-2 56578-35-9
66894-06-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with telluronium salt)

IT 111873-49-5P **111873-50-8P** 133505-33-6P
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and reaction of, with α,β-unsatd. aldehydes)

IT 16913-46-5P 29179-25-7P 40414-46-8P 40414-48-0P 40414-49-1P
53649-66-4P 90812-15-0P 133505-12-1P 133505-13-2P 133505-14-3P
133505-15-4P 133505-16-5P 133505-17-6P 133505-18-7P 133505-19-8P
133505-20-1P 133505-21-2P 133505-22-3P 133505-23-4P 133505-24-5P
133505-25-6P 133505-26-7P 133505-27-8P 133505-28-9P 133505-29-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 70-11-1, α-Bromoacetophenone 105-36-2, Ethyl bromoacetate
107-14-2, Chloroacetonitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dibutyltellurium)

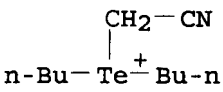
IT 133505-30-3 133505-31-4 133505-32-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with α,β-unsatd. aldehyde)

IT 38788-38-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with α-bromoacetophenone)

IT **111873-50-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and reaction of, with α,β-unsatd. aldehydes)

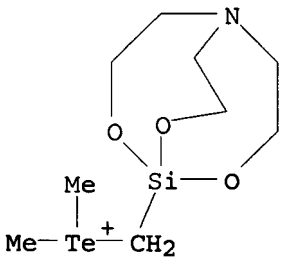
RN 111873-50-8 HCAPLUS

CN Telluronium, dibutyl(cyanomethyl)-, chloride (9CI) (CA INDEX NAME)



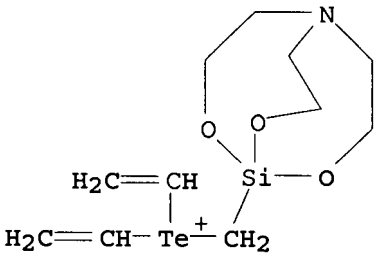
L19 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:594851 HCAPLUS
DOCUMENT NUMBER: 111:194851
TITLE: Diorganyl(silatran-1-ylmethyl)telluronium iodides
AUTHOR(S): Voronkov, M. G.; Sorokin, M. S.
CORPORATE SOURCE: Irk. Inst. Org. Khim., Irkutsk, USSR
SOURCE: Zhurnal Obshchei Khimii (1989), 59(3), 590-2
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 111:194851
AB Treating 1-(iodomethyl)silatrane with R2Te (R = Me, vinyl) in MeCN gave 90-95% title compds. R2Te+CH2Si(OCH2CH2)3N I-, for which the toxicities were determined in white mice.
CC 29-6 (Organometallic and Organometalloidal Compounds)
ST silatrane iodomethyl tellurylation diorgano telluride; silatranylmethyltelluronium iodide prepn toxicity
IT Substitution reaction
(tellurylation, of (iodomethyl)silatrane with diorgano tellurides)
IT 67349-08-0 67353-52-0 111080-00-3 123478-26-2
RL: PRP (Properties)
(NMR of)
IT 41952-88-9 42003-39-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(iodination of)
IT 52741-69-2P 57587-56-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with telluronium compds.)
IT 52741-69-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and tellurylation of)
IT **120220-00-0P 120220-01-1P**
RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**
(preparation and toxicity of)
IT **123478-24-0P 123478-25-1P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT 593-80-6 63000-06-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with iodomethylsilatrane)
IT 593-80-6, Dimethyl telluride 63000-06-6, Divinyl telluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(tellurylation with, of (iodomethyl)silatrane)
IT **120220-00-0P 120220-01-1P**
RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**
(preparation and toxicity of)

RN 120220-00-0 HCAPLUS
CN Telluronium, dimethyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



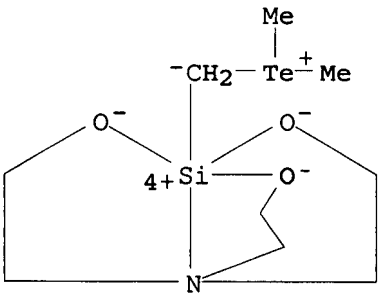
● I^-

RN 120220-01-1 HCAPLUS
CN Telluronium, diethenyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



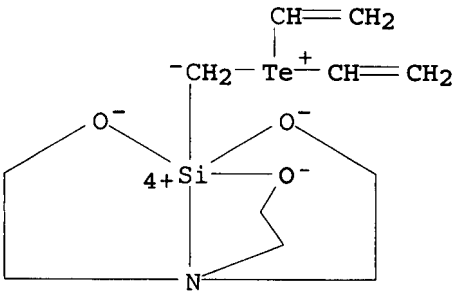
● I^-

IT **123478-24-0P 123478-25-1P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 123478-24-0 HCAPLUS
CN Silicon(1+), (dimethyltelluronium η-methylide)[[2,2',2''-nitrilotris[ethanolato]](3-)-N,O,O',O'']-, iodide, (TB-5-23)- (9CI) (CA INDEX NAME)



● I^-

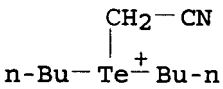
RN 123478-25-1 HCAPLUS
CN Silicon(1+), (diethenyltelluronium η-methylide)[[2,2',2''-nitrilotris[ethanolato]](2-)-N,O,O',O'']-, iodide (9CI) (CA INDEX NAME)



● I^-

L19 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:549016 HCAPLUS
DOCUMENT NUMBER: 109:149016
TITLE: Synthetic applications of organotellurium compounds. 1. A facile synthesis of α,β-unsaturated esters, ketones, and nitriles
AUTHOR(S): Huang, Xian; Xie, Linghong; Wu, Hong
CORPORATE SOURCE: Dep. Chem., Hangzhou Univ., Hngzhou, Peop. Rep. China
SOURCE: Journal of Organic Chemistry (1988), 53(20), 4862-4
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:149016
AB Two telluronium ylides, dibutyltelluronium cyanomethylide and phenacylide, were synthesized and reacted with carbonyl compds. to give α,β-unsatd. nitriles and ketones. In presence of di-Bu telluride, α-halo ester, and α-halo nitrile and α-halo ketone also condensed easily with carbonyl compds. to afford a simpler method for the synthesis of α,β-unsatd. esters, nitriles, and

ketones.
CC 25-20 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 29
ST telluronium ylide reaction carbonyl compd; ester unsatd alpha beta; ketone unsatd alpha beta; nitrile unsatd alpha beta
IT Carbonyl compounds, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with telluronium ylides)
IT Ylides
RL: RCT (Reactant); RACT (Reactant or reagent)
(telluronium, reaction of, with carbonyl compds.)
IT Carboxylic acids, preparation
(α,β unsatd., Me esters, preparation of, from carbomethoxymethyldibutyltelluronium bromide and benzaldehydes)
IT Nitriles, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(α,β-unsatd., preparation of, from dibutyltelluronium cyanomethylide and benzaldehydes)
IT Ketones, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(α,β-unsatd., preparation of, from dibutyltelluronium phenacylide and benzaldehydes)
IT 111873-48-4P 111873-49-5P **111873-50-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and reaction of, with carbonyl compds.)
IT 614-48-2P 953-26-4P 956-04-7P 1222-98-6P 1608-36-2P 1664-59-1P 1774-66-9P 3650-78-0P 4360-47-8P 4435-18-1P 4786-24-7P 27892-88-2P 28446-68-6P 28446-70-0P 28446-72-2P 74738-21-9P 76386-57-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 38788-38-4, Dibutyl telluride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloroacetonitrile)
IT 70-11-1 96-32-2, Methyl bromoacetate 107-14-2, Chloroacetonitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with di-Bu telluride)
IT 105-36-2, Ethyl bromoacetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with di-Bu telluride and nitrobenzaldhyde)
IT 67-64-1, Acetone, reactions 89-98-5, o-Chlorobenzaldehyde 99-61-6 100-52-7, Benzaldehyde, reactions 104-87-0, p-Methylbenzaldehyde 104-88-1, p-Chlorobenzaldehyde, reactions 108-94-1, Cyclohexanone, reactions 123-11-5, p-Methoxybenzaldehyde, reactions 555-16-8, p-Nitrobenzaldehyde, reactions 1122-91-4, p-Bromobenzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with telluronium ylide)
IT **111873-50-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and reaction of, with carbonyl compds.)
RN 111873-50-8 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, chloride (9CI) (CA INDEX NAME)

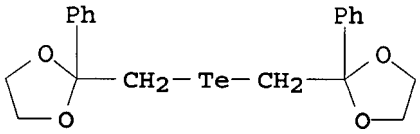


L19 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:129558 HCAPLUS
DOCUMENT NUMBER: 104:129558
TITLE: Synthesis of diphenacyl telluride and related substances
AUTHOR(S): Engman, Lars
CORPORATE SOURCE: Dep. Org. Chem., R. Inst. Technol., Stockholm, S-100 44, Swed.
SOURCE: Organometallics (1986), 5(3), 427-31
CODEN: ORGND7; ISSN: 0276-7333
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 104:129558

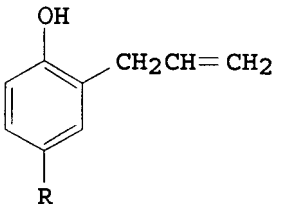
AB (PhCOCH2)2Te was prepared for the first time by a mild Na2S2O5 reduction of (PhCOCH2)2TeCl2 in a two-phase system. (RCOCH2)2TeCl2 (R = substituted Ph, 1-, 2-naphthyl, 2-thienyl, 9-anthryl, 2-benzo[b]furanyl), prepared from TeCl4 and various acetylarom. compds., were similarly reduced to (RCOCH2)2Te. 4-Methoxyphenyl phenacyl telluride and 2-naphthyl phenacyl telluride were similarly prepared The new materials, although unstable, could be handled and characterized without special precautions. Treatment of (PhCOCH2)2Te with m-ClC6H4C(O)OOH or Na2S caused decomposition with formation of PhCOMe. Photolysis in dry benzene under N also resulted in formation of PhCOMe.

CC 25-14 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
ST diphenacyl telluride
IT **99766-37-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and attempted transketalization of)
IT 36362-83-1P 66839-13-2P 67096-37-1P 73537-53-8P 77017-00-6P
77840-07-4P 99766-31-1P 99766-32-2P 99766-33-3P 99766-34-4P
99766-35-5P 99766-39-9P 99766-45-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)
IT 3674-77-9P 98797-28-5P 99766-22-0P 99766-23-1P 99766-24-2P
99766-25-3P 99766-26-4P 99766-27-5P 99766-28-6P 99766-29-7P
99766-30-0P 99766-36-6P 99766-38-8P 99766-40-2P 99766-41-3P
99766-42-4P 99766-43-5P 99766-44-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 99766-21-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, reduction, and oxidation of)
IT 66697-24-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (bromomethyl)phenyldioxolane)
IT 36309-68-9 71578-23-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with acetophenone)
IT 105-36-2 3418-21-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dithienyl ditelluride)
IT 70-11-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium telluride)
IT 88-15-3 93-08-3 98-86-2, reactions 99-90-1 99-91-2 100-06-1
108-94-1, reactions 122-00-9 502-42-1 502-49-8 784-04-3 941-98-0
1646-26-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with tellurium tetrachloride)
IT **99766-37-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and attempted transketalization of)
RN 99766-37-7 HCAPLUS
CN 1,3-Dioxolane, 2,2'-[tellurobis(methylene)]bis[2-phenyl- (9CI) (CA INDEX NAME)



L19 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:514642 HCAPLUS
DOCUMENT NUMBER: 95:114642
TITLE: Oxidative cyclization of some γ- and δ-hydroxy olefins induced by tellurium dioxide
AUTHOR(S): Bergman, Jan; Engman, Lars
CORPORATE SOURCE: Dep. Org. Chem., Royal Inst. Technol., Stockholm, S-100 44/70, Swed.
SOURCE: Journal of the American Chemical Society (1981), 103(17), 5196-200
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 95:114642
GI



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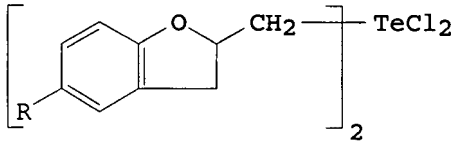


II

AB TeO2 reacted with 2 equivalent CH2:CH(CH2)nOH (n = 3,4) or phenols I (R = H, Me, Cl) in AcOH containing LiCl to form, resp., (R1CH2)2TeCl2 (R1 = tetrahydro-2-furyl or -pyranyl) or II via an internal cyclization. The dialkyltellurium dichlorides were reduced to their corresponding dialkyltellurides using Na2S2O5 or N2H4·H2O. A mechanism is postulated involving an electrophilic attack by a solubilized Te species followed by an intramol. nucleophilic attack by a hydroxy group. Vicinal proton coupling consts. indicate a preferred conformation of the dialkyltellurium dichlorides in which the O atoms of the furan rings are coordinated to Te.

CC 22-9 (Physical Organic Chemistry)

ST pentenol oxidn tellurium dioxide cyclization; hexenol oxidn tellurium dioxide cyclization; alkylphenol oxidn tellurium dioxide cyclization; conformation dialkyltellurium dichloride; NMR dialkyltellurium dichloride

IT Conformation and Conformers
Nuclear magnetic resonance
(of dialkyltellurium dichlorides)

IT Oxidation
(of hydroxy alkenes with tellurium dioxide, cyclization in)

IT Ring closure and formation
(oxidative, of hydroxy alkenes by tellurium dioxide)

IT 892-20-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(detelluration by, of difuranyl tellurium derivative)

IT 7447-41-8, uses and miscellaneous
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative cyclization of alkenols with tellurium dioxide in presence of)

IT 821-09-0 821-41-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative cyclization of, by tellurium dioxide)

IT 1745-81-9 6628-06-4 13997-73-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative cyclization of, with tellurium dioxide)

IT 7446-07-3
RL: PRP (Properties)
(oxidation by, of alkenol, cyclization in)

IT 627-27-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, with tellurium dioxide)

IT **78733-63-8P 78733-64-9P 78733-67-2P**
78733-68-3P **78733-69-4P**
RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**
(preparation and NMR of)

IT **78733-62-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and chlorination of)

IT **78733-61-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and reduction of)

IT 192-93-8P 1746-11-8P 14835-47-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

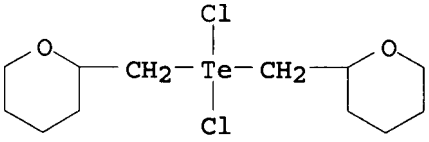
IT **78733-65-0P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation, NMR, and detelluration of)

IT **78733-66-1P**

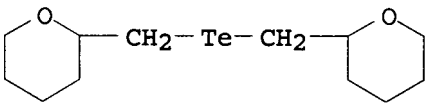
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation, NMR, and reduction of)

IT **78733-63-8P 78733-64-9P 78733-67-2P**
78733-69-4P
RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**
(preparation and NMR of)

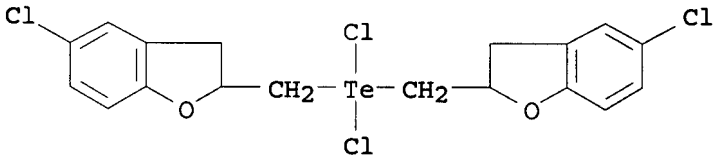
RN 78733-63-8 HCAPLUS
CN Tellurium, dichlorobis[(tetrahydro-2H-pyran-2-yl)methyl]-, (T-4)- (9CI) (CA INDEX NAME)



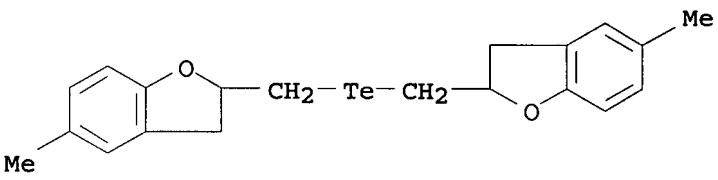
RN 78733-64-9 HCAPLUS
CN 2H-Pyran, 2,2'-[tellurobis(methylene)]bis[tetrahydro- (9CI) (CA INDEX NAME)



RN 78733-67-2 HCAPLUS
CN Tellurium, dichlorobis[(5-chloro-2,3-dihydro-2-benzofuranyl)methyl]-, (T-4)- (9CI) (CA INDEX NAME)

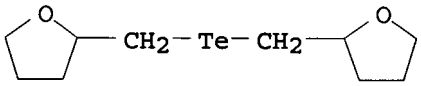


RN 78733-69-4 HCAPLUS
CN Benzofuran, 2,2'-[tellurobis(methylene)]bis[2,3-dihydro-5-methyl- (9CI) (CA INDEX NAME)

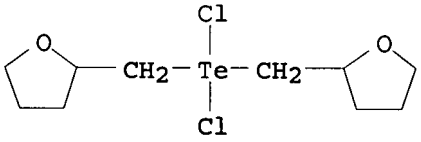


IT **78733-62-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and chlorination of)

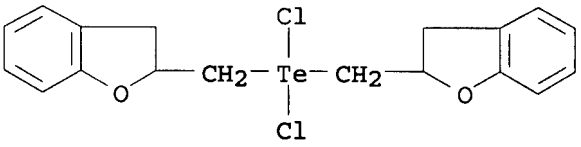
RN 78733-62-7 HCAPLUS
CN Furan, 2,2'-[tellurobis(methylene)]bis[tetrahydro- (9CI) (CA INDEX NAME)



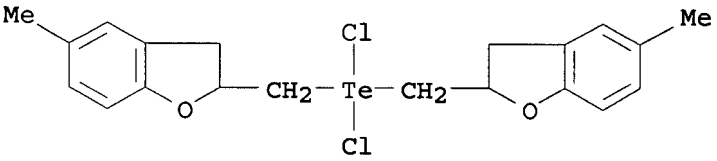
IT **78733-61-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and reduction of)
RN 78733-61-6 HCAPLUS
CN Tellurium, dichlorobis[(tetrahydro-2-furanyl)methyl]-, (T-4)- (9CI) (CA INDEX NAME)



IT **78733-65-0P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation, NMR, and detelluration of)
RN 78733-65-0 HCAPLUS
CN Tellurium, dichlorobis[(2,3-dihydro-2-benzofuranyl)methyl]-, (T-4)- (9CI) (CA INDEX NAME)



IT **78733-66-1P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation, NMR, and reduction of)
RN 78733-66-1 HCAPLUS
CN Tellurium, dichlorobis[(2,3-dihydro-5-methyl-2-benzofuranyl)methyl]-, (T-4)- (9CI) (CA INDEX NAME)



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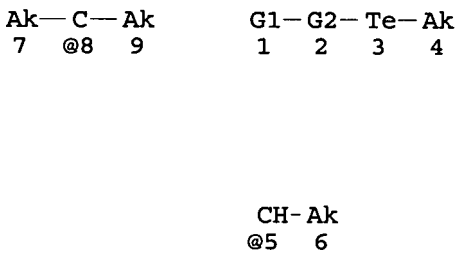
L8 STR



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VAR G2=CH2/5/8
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
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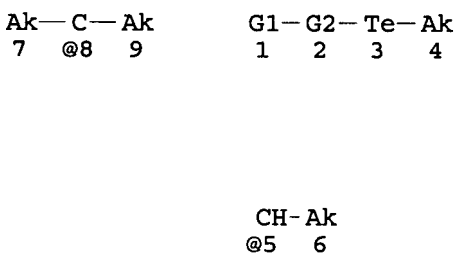
L13 STR



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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

Remaining 14 CA References

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L15 50 SEA FILE=REGISTRY SUB=L10 SSS FUL L13
L16 35 SEA FILE=HCAPLUS ABB=ON L15
L17 21 SEA FILE=HCAPLUS ABB=ON L16(L)PREP/RL
L18 4 SEA FILE=HCAPLUS ABB=ON L17 AND (L4 OR METAL?(2A)(TE OR TELLURIUM))
L19 17 SEA FILE=HCAPLUS ABB=ON L17 NOT L18
L20 14 SEA FILE=HCAPLUS ABB=ON L16 NOT (L18 OR L19)

=> D L20 1-14 IBIB ABS IND HITSTR

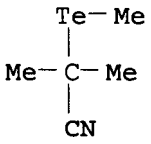
L20 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1293505 HCAPLUS

DOCUMENT NUMBER: 144:43240
TITLE: Photoresist polymer, making method, and chemically amplified positive resist composition
INVENTOR(S): Takeda, Takanobu; Watanabe, Osamu
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

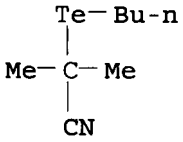
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005271978	A1	20051208	US 2005-142782	20050602
JP 2005344009	A2	20051215	JP 2004-165553	20040603
PRIORITY APPLN. INFO.:			JP 2004-165553 A	20040603

AB A polymer is prepared by radical polymerization of a monomer using an organo tellurium or organoselenium compound as a polymerization initiator. The polymer has a narrower dispersity Mw/Mn and is adequately random. A resist composition comprising the polymer as a base resin has advantages including a dissoln. contrast of resist film, high resolution, exposure latitude, process flexibility, good pattern profile after exposure, and minimized line edge roughness.

IC ICM G03C001-492
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
ST photoresist polymer chem amplified polymn initiator
IT Photoresists
(photoresist polymer for chemical amplified pos. resist composition)
IT 485819-05-4P 651043-12-8P 870990-65-1DP, Acetoxystyrene-tert-butyl methacrylate-styrene copolymer, hydrolyzed 870990-66-2DP, Acetoxystyrene-1-ethylcyclopentyl methacrylate copolymer, hydrolyzed 870990-67-3DP, Acetoxystyrene-tert-butyl methacrylate-4-tert-butoxystyrene copolymer, hydrolyzed 870990-68-4DP, hydrolyzed
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photoresist polymer for chemical amplified pos. resist composition)
IT **582319-76-4 791104-08-0** 791104-09-1 870990-69-5
RL: CAT (Catalyst use); USES (Uses)
(polymerization initiator; preparation of photoresist polymer for chemical amplified pos. resist composition)
IT **582319-76-4 791104-08-0**
RL: CAT (Catalyst use); USES (Uses)
(polymerization initiator; preparation of photoresist polymer for chemical amplified pos. resist composition)
RN 582319-76-4 HCAPLUS
CN Propanenitrile, 2-methyl-2-(methyltelluro)- (9CI) (CA INDEX NAME)



RN 791104-08-0 HCAPLUS
CN Propanenitrile, 2-(butyltelluro)-2-methyl- (9CI) (CA INDEX NAME)



L20 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:844580 HCAPLUS
DOCUMENT NUMBER: 144:292394
TITLE: First application of ionic liquid to reactions involving organotellurium compounds as intermediates
AUTHOR(S): Wang, Lei; Huang, Zhizhen
CORPORATE SOURCE: Department of Chemistry, Zhejiang University, Hangzhou, 310028, Peop. Rep. China
SOURCE: Journal of Chemical Research (2005), (7), 446-448
CODEN: JCROA4
PUBLISHER: Science Reviews
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes proceeded smoothly in the ionic solvent [bmim][BF4], affording a novel method for the stereoselective synthesis of (E)-α,β-unsatd. compds. in high purity, excellent yields and high stereoselectivity.
CC 25-22 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
ST telluronium salt condensation reaction aldehyde ionic liq; aldehyde condensation reaction butyl telluride bromide ionic liq; ester unsatd prepn; nitrile unsatd prepn
IT Ionic liquids
(preparation of (E)-α,β-unsatd. compds. by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)
IT Bromides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of (E)-α,β-unsatd. compds. by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)
IT Onium compounds
RL: RCT (Reactant); RACT (Reactant or reagent)
(telluronium; preparation of (E)-α,β-unsatd. compds. by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)
IT Esters, preparation
Nitriles, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(α,β-unsatd.; preparation of (E)-α,β-unsatd. compds.

by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)

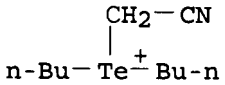
IT 174501-65-6, 1-Butyl-3-methylimidazolium tetrafluoroborate
RL: NUU (Other use, unclassified); USES (Uses)
(ionic liquid, solvent; preparation of (E)-α,β-unsatd. compds. by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)

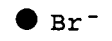
IT 96-32-2, Methyl bromoacetate 100-52-7, Benzaldehyde, reactions 104-87-0, p-Methylbenzaldehyde 104-88-1, p-Chlorobenzaldehyde, reactions 105-36-2, Ethyl bromoacetate 459-57-4, p-Fluorobenzaldehyde 555-16-8, p-Nitrobenzaldehyde, reactions 590-17-0, Bromoacetonitrile 38788-38-4, Dibutyl telluride 111873-48-4 133505-33-6 **142907-36-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of (E)-α,β-unsatd. compds. by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)

IT 637-57-0P 1754-62-7P 1885-38-7P 4192-77-2P 14378-04-2P 20754-20-5P 20754-21-6P 24393-49-5P 24393-50-8P 24393-61-1P 29246-70-6P 35121-93-8P 100891-10-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of (E)-α,β-unsatd. compds. by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)

IT **142907-36-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of (E)-α,β-unsatd. compds. by condensation reaction of telluronium salts with aldehydes or di-Bu telluride with bromides and aldehydes in ionic liquid)

RN 142907-36-6 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, bromide (9CI) (CA INDEX NAME)





REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:804052 HCAPLUS
DOCUMENT NUMBER: 142:2612
TITLE: Isotope and Elemental Effects Indicate a Rate-Limiting Methyl Transfer as the Initial Step in the Reaction Catalyzed by Escherichia coli Cyclopropane Fatty Acid Synthase
AUTHOR(S): Iwig, David F.; Grippe, Anthony T.; McIntyre, Timothy A.; Booker, Squire J.
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, The Pennsylvania State University, University Park, PA, 16802, USA
SOURCE: Biochemistry (2004), 43(42), 13510-13524
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Cyclopropane fatty acid (CFA) synthases catalyze the formation of cyclopropane rings on unsatd. fatty acids (UFAs) that are natural components of membrane phospholipids. The methylene carbon of the cyclopropane ring derives from the activated Me group of S-adenosyl-L-methionine (AdoMet), affording S-adenosyl-L-homocysteine (AdoHcys) and a proton as the remaining products. This reaction is unique among AdoMet-dependent enzymes, because the olefin of the UFA substrate is isolated and unactivated toward nucleophilic or electrophilic addition, raising the question as to the timing and mechanism of proton loss from the activated Me group of AdoMet. Two distinct reaction schemes have been proposed for this transformation; however, neither was based on detailed in vitro mechanistic anal. of the enzyme. In the preceding paper [Iwig, D. F. and Booker, S. J. (2004) Biochem. 43, http://dx.doi.org/10.1021/bi04 8693+], we described the synthesis of two analogs of AdoMet, Se-adenosyl-L-selenomethionine (SeAdoMet) and Te-adenosyl-L-telluromethionine (TeAdoMet), and their intrinsic reactivity toward polar chemical in which AdoMet is known to be involved. We found that the electrophilicity of AdoMet and its onium congeners followed the series SeAdoMet > AdoMet > TeAdoMet, while the acidity of the carbons adjacent to the relevant heteroatom followed the series AdoMet > SeAdoMet > TeAdoMet. When each of these compds. was used as the methylene donor in the CFA synthase reaction, the kinetic parameters of the reaction, kcat and kcat KM-1, followed the series SeAdoMet > AdoMet > TeAdoMet, suggesting that the reaction takes place via Me transfer followed by proton loss, rather than by processes that are initiated by proton abstraction from AdoMet. Use of S-adenosyl-L-[methyl-d3]methionine as the methylene donor resulted in an inverse isotope effect of 0.87±0.083, supporting this conclusion and also indicating that the Me transfer takes place via a tight sN2 transition state.

CC 7-4 (Enzymes)

ST isotope effect methyl transfer cyclopropane fatty acid synthase

IT Isotope effect
(deuterium; kinetic parameters of cyclopropane fatty acid synthase)

IT Electrophilicity
Methyl group
Transition state structure
(isotope and elemental effects indicate rate-limiting Me transfer as initial step in reaction catalyzed by Escherichia coli cyclopropane fatty acid synthase)

IT Enzyme kinetics
Michaelis constant
(kinetic parameters of cyclopropane fatty acid synthase)

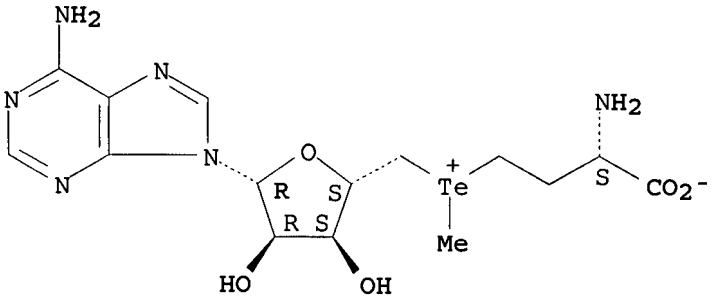
IT Fatty acids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(unsatd.; isotope and elemental effects indicate rate-limiting Me transfer as initial step in reaction catalyzed by Escherichia coli cyclopropane fatty acid synthase)

IT 5134-38-3, Adenosylselenomethionine 29908-03-0, S-Adenosyl-L-methionine 37256-90-9, Cyclopropane fatty acid synthase 264192-93-0 **797032-25-8**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(isotope and elemental effects indicate rate-limiting Me transfer as initial step in reaction catalyzed by Escherichia coli cyclopropane fatty acid synthase)

IT **797032-25-8**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(isotope and elemental effects indicate rate-limiting Me transfer as initial step in reaction catalyzed by Escherichia coli cyclopropane fatty acid synthase)

RN 797032-25-8 HCAPLUS
CN Adenosine, 5'-[[(3S)-3-amino-3-carboxypropyl]methyltelluronio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:485156 HCAPLUS
DOCUMENT NUMBER: 139:197835
TITLE: Mechanism-Based Invention of High-Speed Living Radical Polymerization Using Organotellurium Compounds and Azo-Initiators
AUTHOR(S): Goto, Atsushi; Kwak, Yungwan; Fukuda, Takeshi; Yamago, Shigeru; Iida, Kazunori; Nakajima, Mitsuru; Yoshida, Jun-Ichi
CORPORATE SOURCE: Institute for Chemical Research, Kyoto University, Kyoto, 611-0011, Japan
SOURCE: Journal of the American Chemical Society (2003), 125(29), 8720-8721
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Kinetic anal. reveals the existence of two competing pathways in the organotellurium-mediated living radical polymerization (TERP) at elevated temperature
The rate-determining step, namely, the thermal dissociation process, could be bypassed by the addition of conventional radical initiators, and the polymerization
proceeded at low temperature by the degenerative transfer-mediated polymerization The
polymerization conditions are applicable to a variety of vinyl monomers, and the
desired polymers form in a highly controlled manner.
CC 35-4 (Chemistry of Synthetic High Polymers)
ST organotellurium compd azo initiator high speed living radical polymn
IT Polymerization
Polymerization catalysts
Polymerization kinetics
(living, radical; mechanism-based invention of high-speed living radical polymerization using organotellurium compds. and azo-initiators)
IT 78-67-1, AIBN 9003-53-6D, Polystyrene, methyltellanyl terminated
15545-97-8, V-70 39198-34-0, VR-110 415679-75-3 474094-06-9
582319-76-4

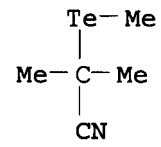
RL: CAT (Catalyst use); USES (Uses)
(mechanism-based invention of high-speed living radical polymerization using organotellurium compds. and azo-initiators)

IT 9003-49-0P, n-Butyl acrylate homopolymer 9003-53-6P, Polystyrene 9011-14-7P, PMMA 25014-41-9P, Acrylonitrile homopolymer 25189-55-3P, N-Isopropyl acrylamide homopolymer 25249-16-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(mechanism-based invention of high-speed living radical polymerization using organotellurium compds. and azo-initiators)

IT 100-42-5, Styrene, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(monomer; mechanism-based invention of high-speed living radical polymerization using organotellurium compds. and azo-initiators)

IT **582319-76-4**
RL: CAT (Catalyst use); USES (Uses)
(mechanism-based invention of high-speed living radical polymerization using organotellurium compds. and azo-initiators)

RN 582319-76-4 HCAPLUS
CN Propanenitrile, 2-methyl-2-(methyltelluro)- (9CI) (CA INDEX NAME)

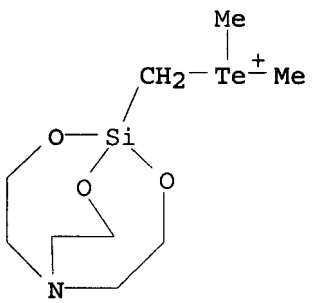


REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:626273 HCAPLUS
DOCUMENT NUMBER: 130:23005
TITLE: Interaction of cholinesterase of the commodore squid (Berryteuthis magister) individuals from different habitat zones with reversible onium inhibitors
AUTHOR(S): Rozengart, E. V.; Basova, N. E.; Khovanskikh, A. E.; Kovalev, N. N.; Epshtein, L. M.
CORPORATE SOURCE: Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg, Russia
SOURCE: Journal of Evolutionary Biochemistry and Physiology (Translation of Zhurnal Evolyutsionnoi Biokhimii i Fiziologii) (1997), 33(3), 322-331
CODEN: JEBPA9; ISSN: 0022-0930
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Interaction of 57 compds. with optical ganglia cholinesterase was studied in Commodore squids Berryteuthis magister from 8 regions of its habitat in the north-west part of the Pacific. It was found that all compds. (peralkylated onium ions, asym. mono-onium and bis-onium derivs. with different nature of onium atom) were reversible inhibitors of the enzyme with a wide spectrum of the inhibition type (from competitive to uncompetitive). In some cases, different sensitivity of these inhibitors to cholinesterases was revealed in the squids from various habitat zones, which allowed detection of 24 specific inhibitors. The results are interpreted in terms of the existence of intraspecies populational groups in this industrial squid species.

CC 12-4 (Nonmammalian Biochemistry)
ST squid population cholinesterase onium inhibitor; Berryteuthis population cholinesterase onium inhibitor
IT Berryteuthis magister
Population genetics
(cholinesterase of commodore squid individuals from different habitat zones interaction with reversible onium inhibitors)
IT Onium compounds
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cholinesterase of commodore squid individuals from different habitat zones interaction with reversible onium inhibitors)
IT Ganglion
(optic; cholinesterase of commodore squid individuals from different habitat zones interaction with reversible onium inhibitors)
IT 51-92-3, Tetramethylammonium ion 66-40-0 626-67-5 676-84-6, Trimethylsulfonium ion 3040-44-6, 1-Piperidineethanol 10159-79-2 10549-76-5 13010-31-6, Tetrapropylammonium ion 13078-04-1 15853-37-9, Tetrabutylphosphonium ion 15912-76-2 18198-39-5 26157-58-4 38734-25-7 38734-26-8 38739-37-6 38739-38-7 44388-12-7, Diethylmethylsulfonium 45875-13-6 60153-37-9 61167-34-8 61167-35-9 62312-65-6 70872-97-8 71104-89-7 100446-58-0 104346-38-5 112919-75-2 112919-77-4 117669-00-8 117669-24-6 117669-26-8 216495-36-2 216495-38-4 216495-39-5 216495-40-8 216495-46-4 216495-47-5 216495-48-6 **216495-49-7** 216495-51-1 216495-52-2 216495-53-3 216495-54-4 216495-55-5 216495-56-6 216495-57-7 216495-58-8 216495-59-9 216495-60-2 216495-61-3 216495-62-4 216495-64-6 216495-65-7 216495-66-8 216495-67-9 216495-68-0
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cholinesterase of commodore squid individuals from different habitat zones interaction with reversible onium inhibitors)
IT 9001-08-5, Cholinesterase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cholinesterase of commodore squid individuals from different habitat zones interaction with reversible onium inhibitors)
IT **216495-49-7**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cholinesterase of commodore squid individuals from different habitat zones interaction with reversible onium inhibitors)
RN 216495-49-7 HCAPLUS
CN Telluronium, dimethyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:477642 HCAPLUS
DOCUMENT NUMBER: 129:256822
TITLE: Comparative study of interaction of cholinesterases from Pacific squids and some mammals with silatrane-onium inhibitors
AUTHOR(S): Rozengart, E. V.; Shestakova, N. N.
CORPORATE SOURCE: Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg, Russia
SOURCE: Journal of Evolutionary Biochemistry and Physiology (Translation of Zhurnal Evolyutsionnoi Biokhimii i Fiziologii) (1997), 33(1), 14-19
CODEN: JEBPA9; ISSN: 0022-0930
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The anticholinesterase effect of 13 logically synthesized organosilicon derivs. containing in their mols. a bicyclic group, namely silatrane one, and onium groups with different heteroatoms (N, S, Se, Te) was investigated for the 1st time. All these compds. proved to be different-type reversible inhibitors (from competitive to uncompetitive ones) of the human red blood cell acetylcholinesterase, the horse blood serum butyrylcholinesterase, and the cholinesterase of Comandor squids Berryteuthis magister from different habitats in the north-western Pacific area. The anticholinesterase effect of these inhibitors was revealed to depend on geometrical parameters of the mols. which were also analyzed. Some specific inhibitors of acetylcholinesterase and butyrylcholinesterase were found as well as the differences in reactivity of cholinesterases from different-habitat squid individuals were reported, which were probably due to existence of the Comandor squid intraspecies societies.

CC 7-3 (Enzymes)
Section cross-reference(s): 12, 13

ST cholinesterase silatrane onium inhibitor squid mammal; butyrylcholinesterase acetylcholinesterase silatrane onium Berryteuthis horse

IT Structure-activity relationship
(enzyme-inhibiting; interaction of cholinesterases from Pacific squids and some mammals with silatrane-onium inhibitors)

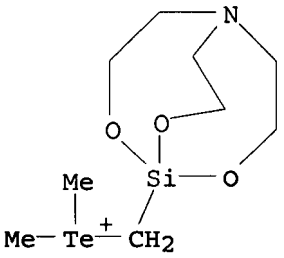
IT Berryteuthis magister
Horse (Equus caballus)
(interaction of cholinesterases from Pacific squids and some mammals with silatrane-onium inhibitors)

IT 51-92-3 283-60-3D, Silatrane, derivs., analogs 676-84-6, Trimethylsulfonium 3197-12-4 9000-81-1, Acetylcholinesterase 9001-08-5, Butyrylcholinesterase 18297-61-5 67353-52-0 67353-54-2 73293-10-4 81992-26-9 100446-58-0 111080-00-3 111080-01-4 111080-02-5 112919-77-4 **120220-00-0 120220-01-1** 120220-02-2 120253-83-0 213623-25-7
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(interaction of cholinesterases from Pacific squids and some mammals with silatrane-onium inhibitors)

IT **120220-00-0 120220-01-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

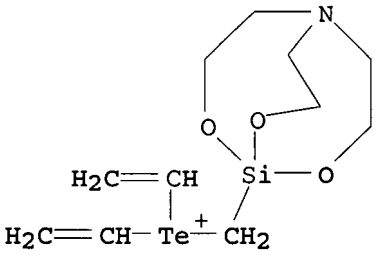
(interaction of cholinesterases from Pacific squids and some mammals with silatrane-onium inhibitors)

RN 120220-00-0 HCAPLUS
CN Telluronium, dimethyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



● I^-

RN 120220-01-1 HCAPLUS
CN Telluronium, diethenyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



● I^-

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:509570 HCAPLUS
DOCUMENT NUMBER: 127:197709
TITLE: Silver halide photographic material containing selenium compound and/or tellurium compound sensitizer
INVENTOR(S): Sasaki, Hirotomo; Mifune, Hiroyuki
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09197603	A2	19970731	JP 1996-5841	19960117

PRIORITY APPLN. INFO.: JP 1996-5841 19960117

AB The material contains ≥1 R1ChMNR2R3 [R1-3 = H, aliphatic hydrocarbyl, aromatic hydrocarbyl, heterocyclic group, acyl, OCO, CONH2, SO2, SO2NH2, S(:O); R1 ≠ H; R2-3 may form N-containing heterocycle; Ch = Se, Te; M = CH2] in ≥1 emulsion layer. The material sensitized by the above compound shows higher sensitivity than that of a material done by S-containing sensitizers and gives low-fog images.

IC ICM G03C001-09
ICS G03C001-34; G03C007-00

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST selenium sensitizer photog film low fog; tellurium sensitizer silver halide photog film

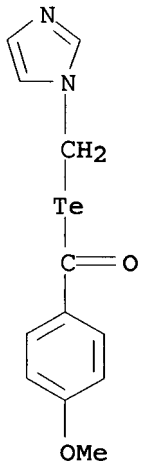
IT Photographic sensitizers
(high-sensitivity silver halide photog. material containing selenium compound
and/or tellurium compound sensitizer)

IT 194418-81-0 194418-82-1 194418-83-2 194418-84-3 194418-85-4
194418-86-5 194418-87-6 194418-88-7 194418-89-8 194418-90-1
194418-91-2
RL: DEV (Device component use); USES (Uses)
(high-sensitivity silver halide photog. material containing selenium compound
and/or tellurium compound sensitizer)

IT **194418-91-2**
RL: DEV (Device component use); USES (Uses)
(high-sensitivity silver halide photog. material containing selenium compound
and/or tellurium compound sensitizer)

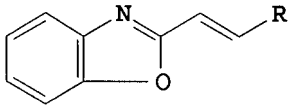
RN 194418-91-2 HCAPLUS

CN Benzenecarbotelluroic acid, 4-methoxy-, Te-(1H-imidazol-1-ylmethyl) ester (9CI) (CA INDEX NAME)



L20 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:612375 HCAPLUS
DOCUMENT NUMBER: 117:212375

TITLE: A facile synthesis of 2-(2-substituted vinyl)benzoxazoles
AUTHOR(S): Shao, Jianguo; Zhong, Qi; Liao, Haiping; Liu, Changqing; Zhou, Jingfeng
CORPORATE SOURCE: Dep. Chem., Yangzhou Teach. Coll., Yangzhou, Peop. Rep. China
SOURCE: Organic Preparations and Procedures International (1992), 24(5), 520-2
CODEN: OPPIAK; ISSN: 0030-4948
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 117:212375
GI



I

AB The title compds. I (R = Ph, substituted Ph, 2-furfuryl) were prepared in 56-92% yield by treating 2-(chloromethyl)benzoxazole with Bu2Te followed by RCHO.

CC 28-6 (Heterocyclic Compounds (More Than One Hetero Atom))

ST benzoxazole vinyl

IT Condensation reaction
(of benzoxazolylmethyldibutyltelluronium chloride with aldehydes, (2-substituted vinyl)benzoxazoles from)

IT Aldehydes, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzoxazolylmethyldibutyltelluronium chloride, (2-substituted vinyl)benzoxazoles from)

IT 3271-27-0P 59066-62-5P 71907-23-8P 71907-25-0P 71907-26-1P 144154-58-5P 144154-59-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT **144334-54-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with aromatic aldehydes, (2-substituted vinyl)benzoxazole from)

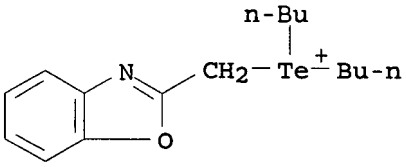
IT 98-01-1, 2-Furfuraldehyde, reactions 100-52-7, Benzaldehyde, reactions 104-87-0, 4-Methylbenzaldehyde 104-88-1, 4-Chlorobenzaldehyde, reactions 123-11-5, 4-Methoxybenzaldehyde, reactions 459-57-4, 4-Fluorobenzaldehyde 555-16-8, 4-Nitrobenzaldehyde, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzoxazolylmethyldibutyltelluronium chloride, (2-substituted vinyl)benzoxazole from)

IT 41014-43-1, 2-(Chloromethyl)benzoxazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dibutyltelluride and aromatic aldehydes, (substituted vinyl)benzoxazoles from)

IT 38788-38-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with (chloromethyl)benzoxazole)

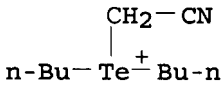
IT **144334-54-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with aromatic aldehydes, (2-substituted vinyl)benzoxazole from)

RN 144334-54-3 HCAPLUS
CN Telluronium, (2-benzoxazolylmethyl)dibutyl-, chloride (9CI) (CA INDEX NAME)



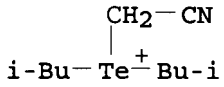
● Cl⁻

L20 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:490417 HCAPLUS
DOCUMENT NUMBER: 117:90417
TITLE: Fast-atom-bombardment mass spectra of telluronium salts
AUTHOR(S): Fu, Guixiang; Zhou, Zhanglin; Yu, Lu; Huang, Yaozeng
CORPORATE SOURCE: Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, 200032, Peop. Rep. China
SOURCE: Organic Mass Spectrometry (1992), 27(6), 695-8
CODEN: ORMSBG; ISSN: 0030-493X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The fast atom bombardment (FAB) mass spectra of 28 telluronium salts R2Te+R'X- were studied. The spectra exhibit the intact cation (C+) and cluster ions ([M + C]+). The principal fragment ions in the FAB mass spectra of telluronium salts are [RTe]+, [R2Te]+•, [R2Te-H]+, [RTeR']+•, and [RTeR' + H]+. When the anion was [BPh4]-, interesting cluster ions such as [M + C-BPh3]+ appeared.
CC 29-8 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 22
ST mass spectra telluronium salt FAB
IT Mass spectra
(of telluronium salts, by fast-atom-bombardment)
IT 18987-26-3 41384-85-4 111873-48-4 111873-49-5 **111873-50-8**
113449-25-5 130318-72-8 132356-17-3 133505-33-6 134988-30-0
142907-33-3 142907-34-4 142907-35-5 **142907-36-6**
142907-37-7 142907-38-8 142907-39-9 142907-40-2 **142907-41-3**
142907-42-4 142907-43-5 142907-44-6 **142907-46-8**
142907-48-0 142907-50-4 142907-52-6 142907-54-8 142907-56-0
RL: PRP (Properties)
(fast-atom-bombardment mass spectrum of)
IT **111873-50-8 142907-33-3 142907-36-6**
142907-41-3 142907-46-8
RL: PRP (Properties)
(fast-atom-bombardment mass spectrum of)
RN 111873-50-8 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, chloride (9CI) (CA INDEX NAME)



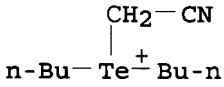
● Cl^-

RN 142907-33-3 HCAPLUS
CN Telluronium, (cyanomethyl)bis(2-methylpropyl)-, chloride (9CI) (CA INDEX NAME)



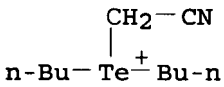
● Cl^-

RN 142907-36-6 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, bromide (9CI) (CA INDEX NAME)



● Br^-

RN 142907-41-3 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, iodide (9CI) (CA INDEX NAME)

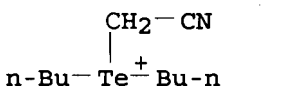


● I^-

RN 142907-46-8 HCAPLUS
CN Telluronium, dibutyl(cyanomethyl)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)

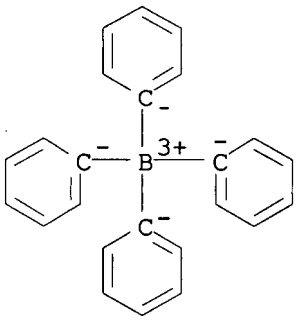
CM 1

CRN 142907-45-7
CMF C10 H20 N Te



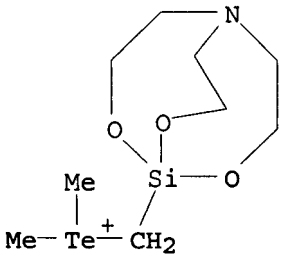
CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



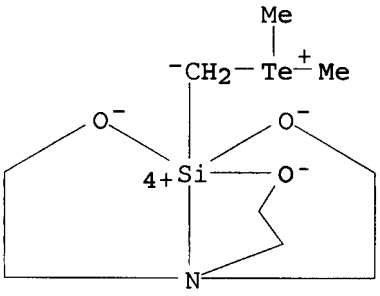
L20 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:632350 HCAPLUS
DOCUMENT NUMBER: 115:232350
TITLE: Organoelement onium reversible cholinesterase inhibitors
AUTHOR(S): Rozengardt, E. V.; Vinyar, T. N.; Kovalev, N. N.; Khavanskikh, A. E.; Sorokin, M. S.; Brovko, V. S.; Skvortsov, N. K.
CORPORATE SOURCE: USSR
SOURCE: Khim. Primen. Elementoorg. Soedin. (1990), 92-7. Editor(s): Ionin, B. I. Leningr. Tekhnol. Inst.: Leningrad, USSR. CODEN: 57FCA9
DOCUMENT TYPE: Conference
LANGUAGE: Russian
AB Twelve title compds. were tested for anticholinesterase activity. Silatrane derivs. with various onium atoms sorbed onto the catalytic surface of butyrylcholinesterase at practically identical rates, whereas the sulfonium analog was most effective against acetylcholinesterase. Bisphosphonium compds. were stronger anticholinesterase agents than monophosphonium or bisammonium derivs.
CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 7
ST onium compd organoelement reversible anticholinesterase; cholinesterase inhibitor organoelement onium compd
IT Onium compounds
RL: RCT (Reactant); RACT (Reactant or reagent)
(organoelement, reversible cholinesterase inhibitors)
IT 2065-66-9 15546-42-6 16001-94-8 18297-61-5 23045-52-5 67349-08-0 67353-52-0 81952-09-2 81992-26-9 88137-78-4 111080-00-3 **120220-00-0** 120220-02-2 **123478-24-0** 123478-26-2 135304-83-5
RL: RCT (Reactant); RACT (Reactant or reagent)

(anticholinesterase activity of)
IT 9001-08-5, Esterase, choline
RL: USES (Uses)
(inhibitors, organoelement onium compds.)
IT **120220-00-0 123478-24-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(anticholinesterase activity of)
RN 120220-00-0 HCAPLUS
CN Telluronium, dimethyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



● I^-

RN 123478-24-0 HCAPLUS
CN Silicon(1+), (dimethyltelluronium η-methylide)[[2,2',2''-nitrilotris[ethanolato]](3-)-N,O,O',O'']-, iodide, (TB-5-23)- (9CI) (CA INDEX NAME)



● I^-

L20 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:621234 HCAPLUS
DOCUMENT NUMBER: 113:221234
TITLE: Spectrally sensitized silver halide photographic materials
INVENTOR(S): Mifune, Hiroyuki; Sasaki, Hirotomo; Kojima, Tetsuo
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02140736	A2	19900530	JP 1988-294309	19881121
PRIORITY APPLN. INFO.:			JP 1988-294309	19881121

GI For diagram(s), see printed CA Issue.

AB The title materials contain sensitizer dyes of the structure I (A1, A2 = a 5- or 6-membered N-containing heterocyclic ring; R1, R2 = C≤10 alkyl, alkenyl; R3, R7 = H; R3 and R1 and R7 and R2 may jointly form a 5- or 6-membered ring; R4-R6 = H, lower alkyl, aryl, ketomethylene; R4 and R6 may jointly form a 5- or 6-membered ring; X = anion; x, z = 0, 1; y = 0-2; m = 0, 1) and telluro ethers of the formula L1TeL2 (L1, L2 = alkyl, alkenyl, alkynyl, cycloalkyl, aryl, aralkyl, heterocyclyl). Addition of the telluro ethers removes the saturation of spectral sensitivity with increasing sensitizer concentration, and increased spectral sensitivity is obtained without increased fog. Thus, a photog. film with an emulsion layer, containing II and HOCH2CH2TeCH2CH2OH, showed a relative sensitivity of 126 at 419 nm and 290 in the sensitized region, vs. 56 and 100, resp., for a film containing only II.

IC ICM G03C001-28

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST film photog telluroether sensitizer effectiveness

IT Photographic films
(containing methine dye sensitizer and telluro ethers, for effective sensitization)

IT Photographic sensitizers
(methine dyes as, sensitivity saturation by, telluro ethers in removal of)

IT Tellurides
RL: USES (Uses)
(photog. films containing spectral sensitizers and, for effective sensitization)

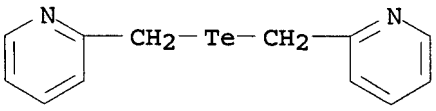
IT 2168-91-4 116393-23-8 130418-20-1 130418-21-2 130418-22-3
130418-23-4 130418-24-5
RL: USES (Uses)
(photog. films containing spectral sensitizers and, for effective sensitization)

IT 23216-67-3 65860-85-7 67374-68-9 109775-22-6 115297-39-7
130418-15-4 130418-16-5 130418-17-6 130418-19-8 130440-51-6
RL: TEM (Technical or engineered material use); USES (Uses)
(photog. spectral sensitizer, sensitivity saturation by, telluro ethers for removal of)

IT **130418-23-4**
RL: USES (Uses)
(photog. films containing spectral sensitizers and, for effective sensitization)

RN 130418-23-4 HCAPLUS

CN Pyridine, 2,2'-[tellurobis(methylene)]bis- (9CI) (CA INDEX NAME)

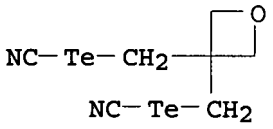


L20 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:148983 HCAPLUS
DOCUMENT NUMBER: 112:148983
TITLE: Cyclic dichalcogenide fog inhibitor for silver halide photographic material
INVENTOR(S): Lok, Roger; Gunther, Wolfgang H. H.; Freeman, John P.
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4861703	A	19890829	US 1988-232255	19880815
JP 02100045	A2	19900412	JP 1989-208023	19890814

PRIORITY APPLN. INFO.: US 1988-232255 A 19880815
OTHER SOURCE(S): CASREACT 112:148983; MARPAT 112:148983
GI For diagram(s), see printed CA Issue.
AB A photog. material contains a radiation-sensitive Ag halide emulsion and a nonsensitizing amount of a cyclic dichalcogenide fog inhibitor having the general formula I (X = S, Se, or Te with ≥1 X being Se or Te; R1, R2 = alkyl, aryl, or aralkyl having 1-20 C atoms, R1 and R2 together may form a cyclic alkylene or ether group having 1-20 C atoms). The photog. material containing I produces photog. images exhibiting low levels of fog while avoiding sensitization attributable to the presence of fog inhibitor. The concentration of I in the photog. material can be reduced as compared to known dichalcogenide fog inhibitors.
IC ICM G03C001-34
INCL 430608000
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST cyclic dichalcogenide photog fog inhibitor
IT Photographic fog inhibitors
(cyclic dichalcogenides as)
IT 36911-30-5, 2-Oxa-6,7-diselenaspiro[3.4]octane
RL: TEM (Technical or engineered material use); USES (Uses)
(photog. fog inhibitor)
IT 429-11-8P, 2,3-Diselenaspiro[4.5]decane 512-86-7P, 2-Thia-3-selenaspiro[4.5]decane 6708-12-9P, 4,4-Bis(hydroxymethyl)-1,2-diselenolane 81360-94-3P, 4,4-Dimethyl-1,2-diselenolane 125906-11-8P 125906-12-9P, 2-Oxa-6,7-ditelluraspiro[3.4]octane
RL: PREP (Preparation)
(preparation of, as photog. fog inhibitor)
IT 78-71-7, 3,3-Bis(chloromethyl)oxetane 141-52-6, Sodium ethoxide 185-11-5, 2-Thiaspiro[3.5]nonane 1312-74-9, Potassium selenide 2658-61-9 3296-88-6 3425-46-5 7782-49-2, Selenium, reactions 39775-49-0, Sodium diselenide 125818-44-2 125906-09-4 **125906-10-7**
RL: RCT (Reactant); RACT (Reactant or reagent)

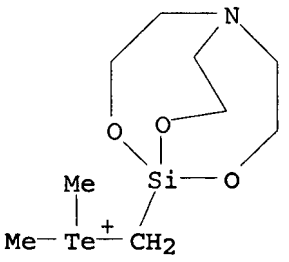
(reaction of, in preparation of photog. fog inhibitor)
IT **125906-10-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of photog. fog inhibitor)
RN 125906-10-7 HCAPLUS
CN Tellurocyanic acid, 3-oxetanylidenebis(methylene) ester (9CI) (CA INDEX NAME)



L20 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:185362 HCAPLUS
DOCUMENT NUMBER: 110:185362
TITLE: Silatranes, reversible cholinesterase inhibitors
AUTHOR(S): Rozengart, E. V.; Kovalev, N. N.; Khovanskikh, A. E.; Sorokin, M. S.; Voronkov, M. G.
CORPORATE SOURCE: Inst. Evol. Fiziol. Biokhim. im. Sechenova, Leningrad, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1989), 23(2), 170-2
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Most onium compds. studied as reversible cholinesterase inhibitors are ammonium derivs. Only recently, phosphonium, iodonium, and sulfonium compds. have been tested for anticholinesterase effects. They all prove to be reversible inhibitors too. However, these compds. occasionally differ from ammonium analogs in efficiency and inhibitory behavior. Incorporation of an organosilicon group into the mols. affects the specificity of their anticholinesterase effects. Interaction between human erythrocyte acetylcholinesterase and serum butyrylcholinesterase of silatranylmethyl derivs. of organic sulfonates, selenites, and telluronites was studied. Structure-activity relations are discussed.
CC 1-3 (Pharmacology)
ST silatrane cholinesterase inhibitors structure
IT Molecular structure-biological activity relationship
(cholinesterase-inhibiting, of silatranes, in human erythrocytes)
IT 283-60-3D, Silatrane, analogs 67353-52-0 67353-54-2 73293-10-4 81992-26-9 111080-00-3 111080-01-4 111080-02-5 **120220-00-0** **120220-01-1** 120220-02-2 120253-83-0
RL: BIOL (Biological study)
(cholinesterase inhibition by, in human erythrocyte, structure in relation to)
IT 9000-81-1
RL: PROC (Process)
(inhibition of, by silatranes in human erythrocyte, structure in relation to)
IT 9001-08-5, Butyrylcholinesterase
RL: PROC (Process)
(inhibition of, of horse serum, by silatranes, structure in relation to)
IT **120220-00-0** **120220-01-1**
RL: BIOL (Biological study)

(cholinesterase inhibition by, in human erythrocyte, structure in relation to)

RN 120220-00-0 HCAPLUS
CN Telluronium, dimethyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



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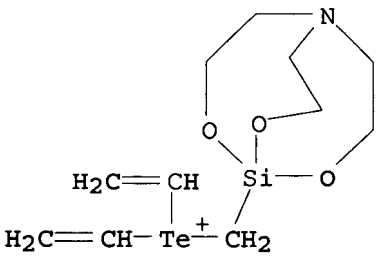
RN 120220-01-1 HCAPLUS
CN Telluronium, diethenyl(2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl)-, iodide (9CI) (CA INDEX NAME)



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L20 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:21394 HCAPLUS
DOCUMENT NUMBER: 108:21394
TITLE: A novel route for the synthesis of α,β-unsaturated esters, ketones and nitriles using dibutyl telluride
AUTHOR(S): Huang, Xian; Xie, Linghong; Wu, Hong
CORPORATE SOURCE: Dep. Chem., Hangzhou Univ., Hangzhou, Peop. Rep. China
SOURCE: Tetrahedron Letters (1987), 28(7), 801-2
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 108:21394
AB In the presence of Bu2Te, RCH2R1 (R = Cl, Br; R1 = CO2Me, CO2Et, Bz, cyano) condense with R2C6H4CHO (R2 = p-NO2, m-NO2, p-Br, p-Cl) to afford

76-93% (E)-R2C6H4CH:CHR1 (same R1, R2) in 1 pot. A possible mechanism is proposed.

CC 25-2 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

ST halo ketone condensation arom aldehyde; condensation haloester benzaldehyde deriv; tellurium Wittig benzaldehyde haloester; unsatd ester; nitrile unsatd; ketone unsatd; phenylacrylonitrile; acrylonitrile phenyl; propenoate nitrophenyl; bromophenylpropenoate; nitrophenylpropenoate

IT Wittig reaction
(of benzaldehyde derivs. with acyldibutyltelluronium halides)

IT 637-57-0P, Methyl (E)-3-(p-nitrophenyl)propenoate 659-04-1P 2960-55-6P 22252-16-0P 22966-09-2P 24393-61-1P, Ethyl (E)-3-(p-nitrophenyl)propenoate 24721-24-2P 29246-70-6P, (E)-β-(p-Nitrophenyl)acrylonitrile 71205-17-9P, Methyl (E)-3-(p-bromophenyl)propenoate
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 99-61-6, m-Nitrobenzaldehyde 104-88-1, p-Chlorobenzaldehyde, reactions 555-16-8, p-Nitrobenzaldehyde, reactions 1122-91-4, p-Bromobenzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(tellurium Wittig reaction of)

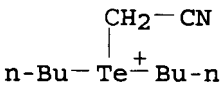
IT 70-11-1, Bromomethyl phenyl ketone 96-32-2, Methyl bromoacetate 105-36-2, Ethyl bromoacetate 107-14-2, Chloroacetonitrile 111873-48-4 111873-49-5 **111873-50-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(tellurium Wittig reaction of, with benzaldehyde derivative)

IT 38788-38-4, Dibutyltelluride
RL: PROC (Process)
(telluroinium salt formation of, with halo esters, ketones, and nitriles)

IT **111873-50-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(tellurium Wittig reaction of, with benzaldehyde derivative)

RN 111873-50-8 HCAPLUS

CN Telluronium, dibutyl(cyanomethyl)-, chloride (9CI) (CA INDEX NAME)



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